U.S. Department of the interior
Bureau of Land Management

Vale District Office
100 Oregon Street
Vale, Oregon 979 18

September 1993

Analysis of Management Alternatives Leslie Gulch Area of Critical Environmental Concern

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM/OR/WA/PL-93/48+1792

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Vale District Office
100 Oregon Street
Vale,Oregon 97918

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

1613

September 14, 1993

Dear Interested Citizen:

Thank you for your interest in following the development of a management plan for the Leslie Gulch Area of Critical Environmental Concern (ACEC). Enclosed is an alternative management analysis for the ACEC for your review and comment. We need your comments within 30 days from the date of this letter in order for them to be considered in the next phase of planning. The three alternatives analyzed provide a range of management options for the ACEC. This analysis and public comments will be used to refine the issues and develop a preferred management alternative.

The management plan is being developed with guidance from the Northern Malheur Management Framework Plan (MFP). During development of alternatives for management of the ACEC, alternatives were identified which, if selected, would require amending the MFP. The possible amendment would be related to inholding acquisition, livestock grazing, mineral development and wild horses as they pertain to management of the relevant and important values of the ACEC. In order to avoid duplicate effort in developing the ACEC management plan and then amending the MFP, we will consider amending the MFP while developing the ACEC management plan.

The next phase of the planning process will be to develop a preferred management alternative for the ACEC, a proposal for amending the MFP, and an environmental assessment. These documents should be available for public review in December 1993. A proposed decision on amending the MFP and a draft ACEC management plan should be available for public review in March 1994. A final decision is expected in June 1994. It is not anticipated there will be any public meetings or hearings, all comments are expected to be in writing.

In order to control the costs of document reproduction and mail, we will mail future documents only to those people who comment on this alternative analysis or to those writing to us indicating they would like to receive future documents for comment.

Sincerely,

Ralph H. He
Malheur Resource Area Manager

Enclosure (as stated)

United States Department of the Interior
Bureau of Land Management
Vale District Office
100 Oregon Street
Vale, Oregon 97918

Analysis Of Management Alternatives
Leslie Gulch
Area Of Critical Environmental Concern

September 1993

Table Of Contents

Maps And Tables

Acronyms

ACEC - Area of Critical Environmental Concern

AUM - Animal Unit Month

CA - Conservation Agreement

EA - Environmental Assessment

EIS - Environmental Impact Statement

FLPMA - Federal Land Policy and Management Act

HMA - Herd Management Area

HMP - Habitat Management Plan

IMP - Interim Management Policy and Guidlines for Lands under Wilderness Review

MFP - Management Framework Plan

MOU - Memorandum of Understanding

NEPA - National Environmental Policy Act

ODFW - Oregon Department of Fish and Wildlife

OHV - Off Highway Vehicle

PUP - Pesticide Use Permit

RNA - Research Natural Area

ROS - Recreation Opportunity Spectrum

RPS - Range Program Summary

VRM - Visual Resource Management

WSA - Wilderness Study Area

htroduction

The purpose of this document is to present and analyze alternative management actions necessary to protect and enhance the unique values found in Leslie Gulch. The area was designated an Area of Critical Environmental Concern (ACEC) in 1983 in the Northern Malheur Management Framework Plan (MFP).

Areas are designated as ACECs when special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and provide safety from natural hazards. The Federal Land Policy and Management Act requires that the BLM give priority to the designation and protection of ACECs.

To be designated as an ACEC, an area must meet the criteria of "Relevance" and "Importance". To meet the "relevance" criterion for ACEC designation, an area must have characteristics such as significant scenic values or habitat for sensitive or threatened animal or plant species. The relevant values or resources identified must also have substantial significance to meet the "importance" criteria for ACEC designation. This means that the values identified must be more than locally significant and must have qualities which make the area fragile, sensitive, unique or vulnerable to adverse change.

The 11,900-acre Leslie Gulch ACEC was identified to protect the relevant and important values of high quality scenery, California bighorn sheep habitat and special status plant species habitat. The objectives for management within the ACEC are to protect, conserve and enhance these values while authorizing the various activities which occur within the area.

Setting

Leslie Gulch drains into the Owyhee Reservoir approximately 50 miles south of Ontario, Oregon, and 60 miles southwest of Boise, Idaho. The mouth of the gulch is at approximately 2600 feet above sea level, and the highest elevation is approximately 5300 feet on the eastern boundary of the ACEC. The boundary of the ACEC is generally defined by the watershed boundaries of Leslie, Slocum, Juniper, Dago and Runaway Gulches and their tributaries. Approximately 600 acres east of Grassy Ridge are also included. The ACEC covers approximately 11,900 acres. Much of the southern boundary of the ACEC is the boundary between public and private lands to the south on Mahogany Mountain. Bureau of Reclamation (BR) lands abut the west boundary of the ACEC near the Owyhee Reservoir.

The climate of the area is similar to that of the Great Basin and is one of extremes. Winter low temperatures can range well below zero, but typically are between 10 and 30 degrees. During the summer, highs generally are near or above 100 degrees daily. While average annual precipitation is near eight inches, actual rainfall amounts are unpredictable. Storm events can bring several inches of rainfall within a few hours. During these times, the otherwise dry gulches can turn into raging torrents which can block or wash out roads and trails. With the exception of a short section below Mud Spring, none of the drainages within the Leslie Gulch ACEC contain perennially flowing water. Surface water typically flows in the drainages for only a short time in the spring or following storm events.

The rugged, scenic topography of the ACEC area has formed primarily by the differential weathering of the Leslie Gulch Ash Flow Tuff. These rocks were deposited 15 million years ago by a rhyolite pyroclastic flow. This violent volcanic explosion, which can be compared to the 1980 Mount Saint Helens eruption, resulted in the filling of the geographic low created by the formation of the Mahogany Mountain caldera. This mobile, molten froth contained hot volcanic gases, volcanic ash and larger volcanic debris. As the deposit cooled and lithified into rock, gases were trapped forming the pitted, "honeycomb" appearance of many of the rocks. Subsequent uplift, faulting and erosion has created the striking canyon vistas present today.

The variable soil types within the ACEC are primarily determined by landform and geologic type. The weathering of volcanic rocks in Leslie Gulch develop soils which are rich in clays and highly erosive. Many drainages have well formed gullies, and rills are common on some hillsides. This erosiveness is due to the steepness of the landforms, the unconsolidated nature of the weathered volcanic ash, the precipitation pattern, and the poor vegetative cover which occurs in the desert setting. Young, shallow soils have developed on outcrops of soft ash deposits, which provide unique conditions needed for many of the special status plants.

The canyons of the Leslie Gulch ACEC support the highest concentration of rare plant species in eastern Oregon, five of which are candidates for listing under the Endangered Species Act. The general ecological setting encompasses a wide variety of plant commu-

nities. An unusual pattern of northern, mesic flora represented by a relict stand of Ponderosa pine, mountain mahogany, and rocky mountain maple are in close association to a southern, xeric flora composed of greasewood, shadscale, and spiny hopsage. When combined with the rare plant species, the vegetative elements of the ACEC give a floristic variety unexcelled in Malheur County.

The Mahogany Ridge Research Natural Area (RNA), designated in the Northern Malheur MFP in 1983, covers 320 acres in the southeast portion of the ACEC. This area contains dense stands of mountain mahogany in complex vegetative associations with sagebrush and Oregon grape and was designated to protect these unusual plant communities.

Mule deer and Rocky Mountain elk are found in the upland habitats of the ACEC and in adjacent lands. Upland game birds such as chukar partridge and California quail occupy much of the area. The rugged canyons also provide habitat for coyote, bobcat, and a variety of non-game migratory birds. Raptors, northern flickers and white-throated swifts use the numerous cliff crevices and cavities, which also provide potential habitat for bats. The area also provides excellent reptile habitat.

Leslie Gulch is popular for recreational use. Developed recreational opportunities include boating, fishing, camping and sightseeing. The boat launch facility is a favored takeout point for floaters on the Owyhee Wild and Scenic River and provides the only launch facility on the upper Owyhee Reservoir. Dispersed recreational opportunities include hiking, rockclimbing, hunting, outdoor photography and wildlife watching. Leslie Gulch and the surrounding area provides one of the few places in Oregon where bighorn sheep can be hunted. The rockclimbing routes within the ACEC are highly challenging.

Most of the ACEC is made up of portions of three Wilderness Study Areas (WSAs). The Slocum Creek, Honeycombs and Upper Leslie Gulch WSAs have all been recommended by the BLM for wilderness designation. The Oregon Wilderness Environmental Impact Statement identified all three WSAs as having a high degree of naturalness and outstanding opportunities for solitude or primitive and unconfined types of recreation.

The Leslie Gulch pasture of the Three Fingers temporary allotment makes up approximately 90 percent of the ACEC. The remainder of the ACEC is within the Bannock pasture of the same allotment.

No systematic cultural resource inventories have been conducted within the Leslie Gulch ACEC boundaries, One prehistoric site has been identified and recorded, but its eligilility for the National Register of Historic Places has not yet been determined. Extensive cultural resource inventories have been conducted upriver from the Leslie Gulch area. The Owyhee River, tributary canyons and adjacent uplands are known to have been intensively and extensively utilized by Native Americans.

No systematic paleontological inventories have been conducted within the Leslie Gulch ACEC boundaries. A single tooth of unknown significance has been identified in the ACEC area.

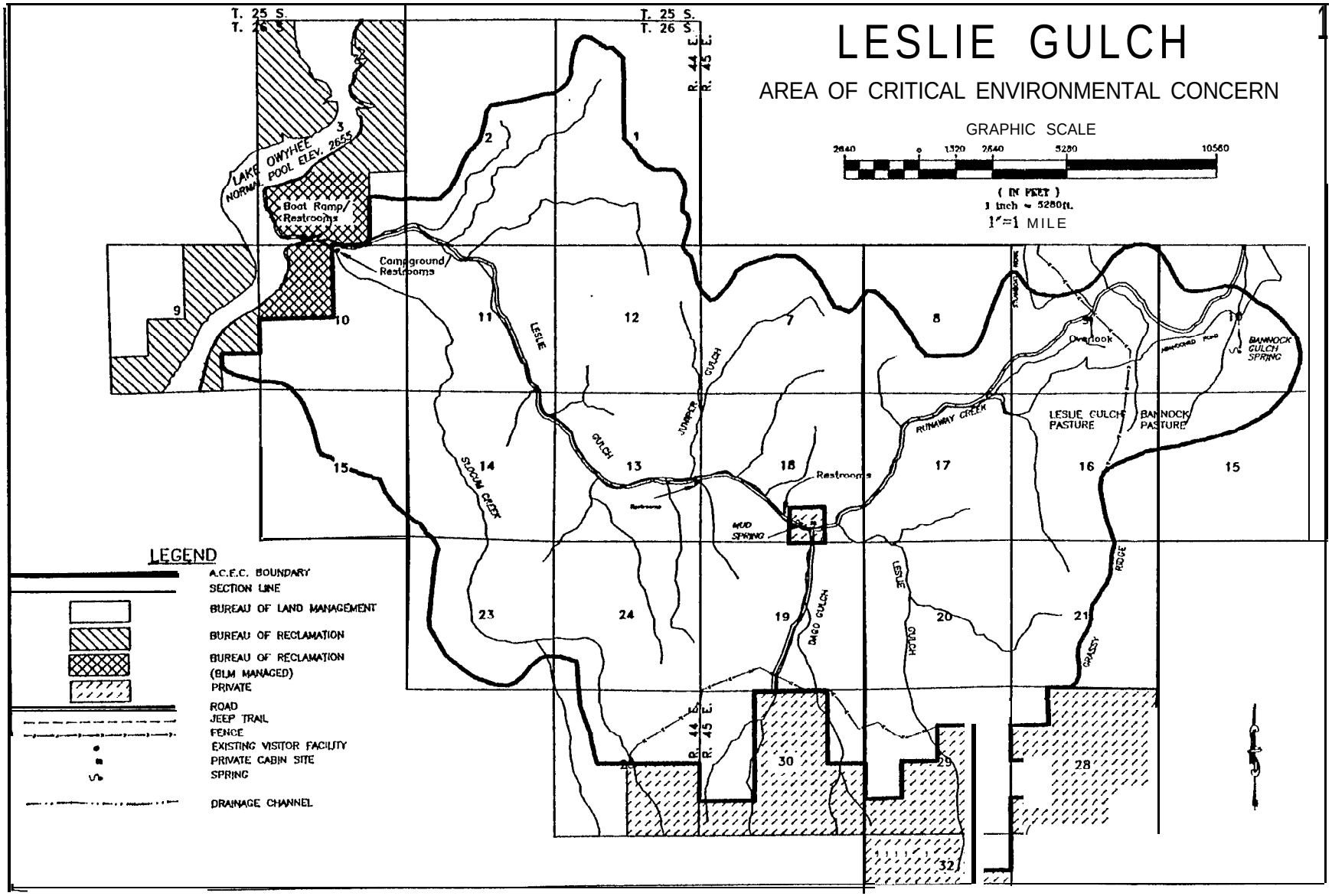
The lands contained within the ACEC are public lands administered by the Bureau of Land Management. One 40-acre, privately owned parcel is located in T26S R45E Sec. 18 SW1/4 SE1/4, at the confluence of Leslie and Dago gulches. This property is not part of the ACEC. There is a cabin and perennially flowing Mud Spring is on the parcel. A 100 foot wide public easement crosses this private land, provides public access to the shore of Owyhee Reservoir.

The lands surrounding Owyhee Reservoir are withdrawn for the use of the Bureau of Reclamation. Approximately 340 acres of these lands are currently managed by the BLM under a Memorandum of Understanding (MOU). These lands which are located at the mouth of Leslie Gulch are neither part of the ACEC nor part of the wilderness study areas, but are managed for compatibility with the ACEC.

Relevant And Important Values

Special Status Plants

Five plant species found within the canyon are candidates for listing under the federal Endangered Species Act. All are associated with the highly unusual ash formations found in the area. Two of these species, Ertter's groundsel (Senecio *ertterae* - Category I) and Packard's blazing star (*Mentzelia packardiae* -Category 2), grow predominantly on the greenish-yellow ash-tuff talus slopes. Grimy ivesia (*Ivesia rhypara* var. *rhypara* - Category 2) and Owyhee clover (*Trifolium owhyeense* - Category 2) grow on a shallow ash substrate. Sterile milk-vetch (*Astragalus sterilis* - Category 2) also is found scattered on ash deposits throughout the region. Three uncommon plant species, Packard's sage-


LESLIE GULCH
AREA OF CRITICAL ENVIRONMENTAL CONCERN
GRAPHIC SCALE
2640 0 1320 2640 5280 10560
(IN FEET)
1 inch = 5280ft.
1"=1 MILE
T. 25 S.
T. 26 S.
R. 44 E.
R. 45 E.
LAKE NORWOOD
OWYHEE POOL ELEV. 2655
Boat Ramp/ Restrooms
Campground/ Restrooms
LESLIE GULCH
JUNIPER GULCH
SLOCUM CREEK
RUNAWAY CREEK
MUD SPRING
BAGO GULCH
LESLIE GULCH PASTURE
BANNOCK PASTURE
Overlook
BANNOCK GULCH SPRING
Restrooms
LEGEND
A.C.E.C. BOUNDARY
SECTION LINE
BUREAU OF LAND MANAGEMENT
BUREAU OF RECLAMATION
BUREAU OF RECLAMATION (BLM MANAGED)
PRIVATE
ROAD
JEEP TRAIL
FENCE
EXISTING VISITOR FACILITY
PRIVATE CABIN SITE
SPRING
DRAINAGE CHANNEL

brush (*Artemisia packardiae*), Mackenzie's phacelia (*Phacelia lutea* var. *mackenziorum*) and bare-stemmed buckwheat (*Eriogonum novonudum*) are also found in the canyons and bluffs of the ACEC. Et-her's groundsel and Packard's blazing star have been listed by the state of Oregon as threatened, and grimy ivesia and sterile milk-vetch are proposed for addition to the state list in 1993.

Based on numbers and total acreage, grimy ivesia is the rarest species in the ACEC. Its geographical distribution includes two small sites in northern Nevada and another small site in Lake County, Oregon. In addition to the Leslie Gulch sites, a site in northern Nevada has also been identified for Packard's blazing star. Ertter's groundsel grows in the Leslie Gulch vicinity and at two restricted sites near Birch Creek, a tributary of the Owyhee River approximately six miles southwest from Leslie Gulch. Owyhee clover and sterile milk-vetch are endemic to the larger Owyhee region, with the clover known only on sites east of the Owyhee River.

Scenic Values

The scenery within the ACEC is dominated by spectacular geologic formations created by the differential weathering of the Leslie Gulch Ash-Flow Tuff member of the Succor Creek formation. The tuff may be 2,000 feet thick in some places. Its great thickness, uniformity and relative resistance to weathering formed the impressive cliffs, outcrops and spires that characterize the area. As the volcanic rocks cooled, gases trapped inside led to the creation of the eerie and spectacular "honeycombing" effect in some areas, and is responsible for many skyline windows in the rock formations. The various ash layers present a variety of colors ranging from yellow to green and multiple shades of red. The areas's vegetation and intrusions of more resistant rhyolite dikes, frequently columnar in appearance, provide additional contrasting texture and color to the inspiring landscape.

Under the BLM Visual Resource Management (VRM) program, the ACEC is within a designated Class II area (See Glossary).

Bighorn Sheep Habitat

California bighorn sheep (*Ovis canadensis californiana*) are a Category 2 candidate for listing under the Endangered Species Act. In the early 1900s, bighorn sheep in Leslie Gulch were extirpated due to domestic sheep diseases and unregulated hunting. Seventeen bighorns were reintroduced in Leslie Gulch in 1965. The herd has grown to a population of approximately 200-240 animals which range outside of the ACEC, utilizing a 120-square mile area on the east side of Owyhee Reservoir and the Owyhee River.

Leslie Gulch provides excellent habitat for bighorn sheep. The steep cliffs of the canyon offer escape cover for the animals, and the small natural shelters along the rock faces provide thermal cover. Grasses, forbs and shrubs provide ample forage. Mud Spring and Owyhee Reservoir provide perennial water. The remote, rugged wilderness study areas extending beyond the ACEC provide a large area with a low potential for human harassment of the bighorns.

Other Values

Access And Roads

The Leslie Gulch Road was originally constructed in the early 1900s as a wagon road from the community of Watson and the farming area along the Owyhee River for access to the east. In the 1960s, at the urging of the Malheur County Commissioners, the present road was constructed from the Succor Creek Road to the Owyhee Reservoir in the late 1960's. This newly constructed road parallels the Leslie Gulch creek bed and follows a route with improved visibility and grade in Runaway Creek.

Today, the Leslie Gulch Road provides public access to one of only four boat launch sites on Owyhee Reservoir, as well as recreational access to the Leslie Gulch area. A lockable gate near the ACEC's eastern edge can be closed if necessary to provide public safety in the event of water-caused road damage.

The ACEC has two primitive roads. One up the bottom of Dago Gulch and another along the top of Steamboat Ridge.

Mineral Resources

The mineral potential of the ACEC was analyzed by the U.S. Geological Survey in 1989 as part of the Wilderness Study Area evaluation process.

Portions of the ACEC have a moderate potential for occurrence of the locatable minerals uranium, thorium, gold, silver, lithium, arsenic, zeolite, mercury

and zinc. Other areas are rated as having low potential for zinc. No mines, prospects, or mining claims are located within the ACEC.

The ACEC is not open for mineral leasing and no current mineral leases exist within the area. Portions of the ACEC have a moderate potential for geothermal resources. The area is rated as having no potential for other leasable mineral resources,

The salable minerals of sand, gravel and stone are currently available for sale throughout the ACEC. While large volumes of these materials exist, these are not considered a resource since similar deposits exist elsewhere which are more accessible and closer to markets. No salable mineral developments are located within the ACEC.

Livestock Grazing

The public land within the ACEC has been grazed by livestock for many years. The name Leslie Gulch was derived from Hiram Leslie, a early rancher in the area. Historically, the first grazing by livestock began in the late 1800s and was unregulated. The Owyhee River was the base of operations for a number of ranches near the ACEC. Early accounts describe extensive, yearlong use by sheep, cattle and horses. Livestock grazing continues to be an important part of the local economy and culture.

Approximately 800 acres of the Bannock pasture and all of the Leslie Gulch pasture are in the ACEC. The Bannock Pasture is on the eastern edge of the ACEC, and watershed from the pasture is not part of the Leslie Gulch drainage system. Both pastures are within the Three Fingers temporary allotment. These pastures have 9,981 active and 4,653 suspended Animal Unit Months (AUMs) with four grazing permittees. Currently, the two pastures are used by two of the permittees, who use the Leslie Gulch pasture with 132 head of cattle and 264 AUMs from March 1 to April 30. The Bannock pasture is used by approximately 450 cattle from May 1 to October 31 in a deferred rotation grazing system with three additional pastures. Grazing use in the Bannock Pasture is deferred until after the critical growth period of key forage species (approximately July 1) two out of three years.

Recreation

The Leslie Gulch area has long attracted recreationists in search of a high quality outdoor experience. Elements of its attractiveness are its remote location with reasonable vehicular access and the opportunity to pursue outdoor recreation activities in a setting with relatively few man-made impacts. Within the ACEC, the area's natural attractions provide for exceptional scenic, geologic, botanical, wildlife, and general sightseeing activities and outstanding opportunities for nature photography.

Under the Recreation Opportunity Spectrum of describing recreational settings, the majority of the lands within the ACEC provide a setting for primitive types of recreational use, while those corridors adjacent to and including the existing roads provide for roaded natural and semiprimitive nonmotorized types of recreation opportunities (see Glossary).

The 1985 development at Owyhee Reservoir of a concrete boat ramp with parking, fish cleaning station and the Slocum Creek campground with vault restrooms, has provided increased recreational use opportunities. The boat ramp is one of only four ramps developed on the reservoir and serves as the only boating access for the upper Owyhee Reservoir area. All improvements except the campground are located on BOR land outside of the ACEC. Through a Memorandum of Understanding (MOU) with the BOR, the BLM manages this area. Two additional vault restrooms are located within the Leslie Gulch canyon adjacent to the Leslie Gulch Road.

Higher recreational use of the area typically occurs before and after the hot summer season. The river floatboating season, the greening up of the desert, and higher water levels of Owyhee Reservoir typically attract the highest use levels during the spring. During the fall when day time temperatures begin to cool and hunting activities increase there is also increased use. Based on limited available seasonal road traffic information, indications are that an upward trend in nonboating visitation is occuring in the Leslie Gulch area. During those years when water storage in Owyhee Reservior has provided reasonable boat ramp access from Leslie Gulch, approximately 50 percent of the area's visitation has occurred from April through June. The remaining 50 percent of annual recreational use occurs mostly from July through approximately mid-November. From 1976 through 1987, the average annual number of visitors to Leslie Gulch has been an estimated 8,360 persons. During the drought years of 1988 through 1992 total visitation was slightly lower, with a higher percentage of use occurring later in the season.

Leslie Gulch remains the primary takeout point for river floaters who put in at Rome on the Owyhee National Wild River. The latter part of the river

floating season coincides with the reservoir boating use season, occasionally straining existing parking capabilities.

The multitude of side canyons and various ridge systems within the ACEC beckon the more adventurous visitor. The Leslie Gulch Road through the main canyon has made such nonmotorized recreational use opportunities more accessible than in most other areas of the Owyhee Breaks country. Dispersed primitive recreation activities include day hiking; geologic, botanic and wildlife viewing; general sightseeing; and hunting.

Upland bird and big game hunters seeking primarily chukar partridge and mule deer visit the area. A selected few people are annually licensed by the ODFW to hunt the prized bighorn sheep.

The Leslie Gulch bighorn sheep herd has been hunted since 1973, with 89 hunters taking 82 bighorn rams. This is one of 26 areas where bighorns are hunted in Oregon, and one of only four areas in Oregon where a nonresident bighorn tag is offered. There are presently two hunts in September with three hunters each season.

Historically, most recreational horse use has been by big game hunters. Hunters with horses travel along the Owyhee River canyon when the reservoir level is low, taking them outside of the ACEC.

Hikers and equestrians have expressed interest in development of a nonmotorized Owyhee Breaks Trail along the east side of the Owyhee Reservoir. This trail would extend from near the state park at the north end of the reservoir to Leslie Gulch and further south. Such a trail would aid recreationists in navigating through an extensive region of public lands located in the Honeycombs and Wild Horse Basin Wilderness Study Areas. Leslie Gulch would be a likely location for providing trailhead amenities since the road provides access through the canyon. Sport rock climbing has increased since 1990. Before then, only one climbing route was known in the area. Current climbing routes are within existing wilderness study areas, notably in or near the upper Leslie Gulch canyon, “Einstein” is the most developed climbing site with 14 summit anchor points and a combination of 26 climbing routes. The site is on a vertical to overhanging rock face accessed by a 0.25 mile hike up upper Leslie Gulch canyon. A second popular climbing site is “Asylum”, which is located on a rock wall at the junction of Runaway Creek and upper Leslie Gulch.

The ACEC is within a designated “limited” off -highway vehicle (OHV) use area. This designation restricts the use of all motorized vehicles yearlong on BLM public lands to three existing routes: the Runaway Creek/Leslie Gulch main road, Dago Gulch Road, and the route on Steamboat Ridge.

While vehicle-accompanied campers are encouraged to limit their activities to the Slocum Creek campground, there are no specific restrictions related to camping activity within the ACEC. Occasionally vehicle camp sites are established off the main roads in the ACEC, particularly in Dago Canyon and along the main Leslie Gulch Road. The Dago Gulch/Leslie Gulch junction area is also a preferred vehicle camping and parking area, some on the private 40-acre parcel and some on adjacent public land. Dispersed vehicle camping activities has resulted in increased damage and destruction of woody vegetation for use in campfires, and impacts on vegetation, soil, and on some rare plant habitats neighboring the Leslie Gulch Road.

Wilderness

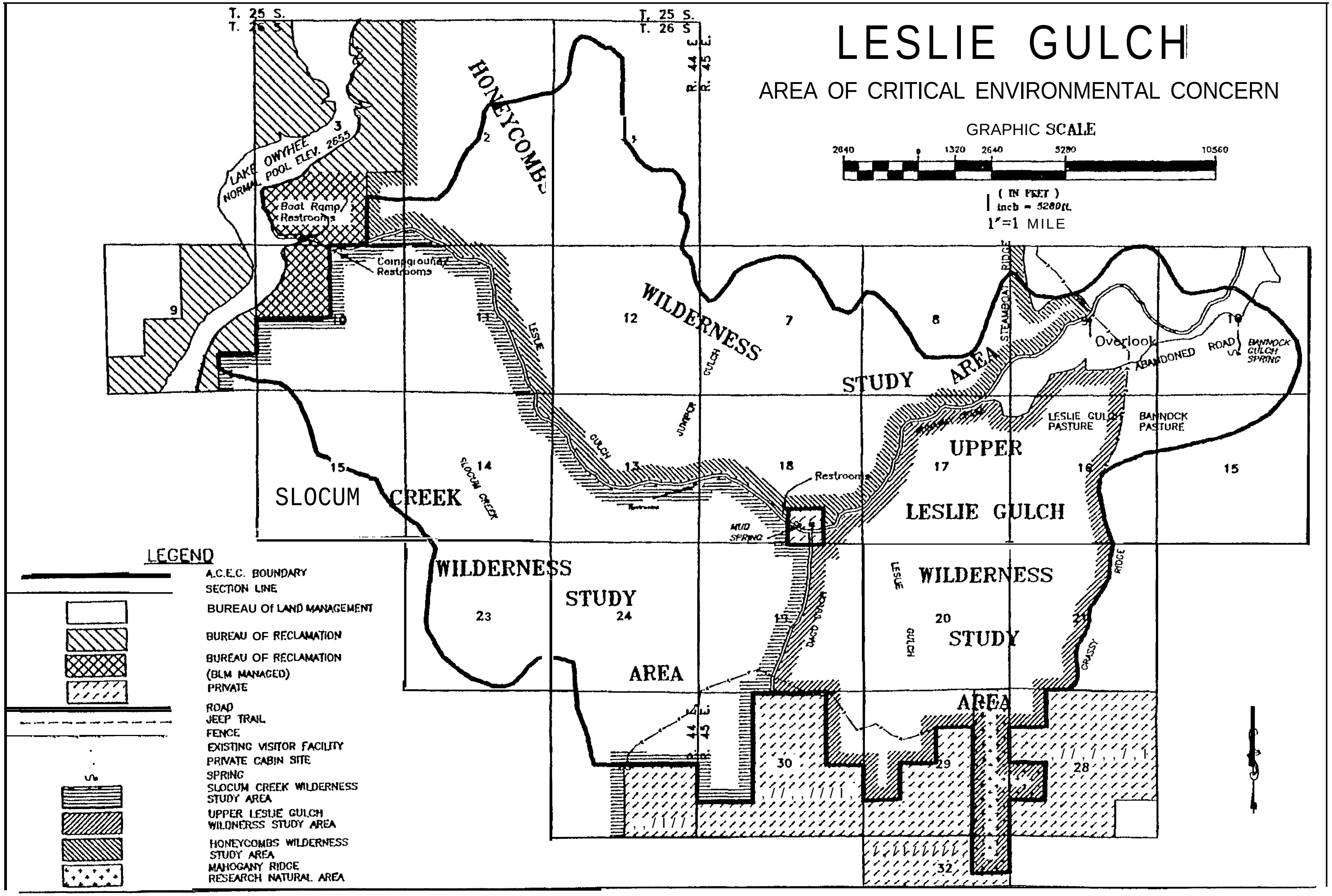
Approximately 85 percent of the ACEC has been designated as wilderness study areas (WSAs). Included is all of the 3,000-acre Upper Leslie Gulch WSA (OR-3-74), about 55 percent of the 7,600-acre Slocum Creek WSA (OR-3-75), and about 8 percent of the 39,000-acre Honeycombs WSA (OR-3-77A).

Wilderness values identified within the three WSAs are outstanding opportunities for primitive and unconfined recreation, a high degree of naturalness and a number of special wilderness features.

Special wilderness features within the ACEC include their spectacular scenery, the presence of several species of special status plants, bighorn sheep, winter habitat for northern bald eagles, Rocky Mountain elk, a disjunct stand of ponderosa pine and an outstanding population of curl-leaf mountain mahogany.

Wildlife

Mule deer and Rocky Mountain elk are found in the upland habitats of the ACEC and lands adjacent to the ACEC. Mule deer also utilize Runaway Gulch during the early winter and lower Leslie Gulch in the late winter and early spring. Elk use varies with the seventy of the winter. Upland game birds such as chukar partridge and California quail occupy much of the area. The rugged canyons also provide habitat for


LESLIE GULCH
AREA OF CRITICAL ENVIRONMENTAL CONCERN
GRAPHIC SCALE
2640
0
1320
2640
5280
10560
(IN FEET)
1 inch = 5280 ft.
1"=1 MILE
T. 25 S.
T. 26 S.
R. 44 E.
R. 45 E.
LAKE OWYHEE
NORMAL POOL ELEV. 2655
Boat Ramp/
Restrooms
Campground/
Restrooms
HONEYCOMBS
WILDERNESS
STUDY AREA
UPPER
LESLIE GULCH
WILDERNESS
STUDY
AREA
SLOCUM CREEK
WILDERNESS
STUDY
AREA
STEAMBOAT RIDGE
Overlook
ABANDONED ROAD
BANNOCK GULCH SPRING
LESLIE GULCH PASTURE
BANNOCK PASTURE
Restrooms
MUD SPRING
LESLIE GULCH
JUNIPER GULCH
SLOCUM CREEK
DAGO GULCH
GRASSY RIDGE
LEGEND
A.C.E.C. BOUNDARY
SECTION LINE
BUREAU Of LAND MANAGEMENT
BUREAU OF RECLAMATION
BUREAU OF RECLAMATION
(BLM MANAGED)
PRIVATE
ROAD
JEEP TRAIL
FENCE
EXISTING VISITOR FACILITY
PRIVATE CABIN SITE
SPRING
SLOCUM CREEK WILDERNESS
STUDY AREA
UPPER LESLIE GULCH
WILDERNESS STUDY AREA
HONEYCOMBS WILDERNESS
STUDY AREA
MAHOGANY RIDGE
RESEARCH NATURAL AREA

coyote, bobcat, hawks, lizards, and a variety of non-game migratory birds. Raptors, northern flickers, and white-throated swifts use the numerous cliff crevices, which also provide potential habitat for bats.

Special status animal species in the ACEC other than California bighorn sheep include bald eagles (*Haliaeetus leucocephalus*), listed as threatened under the Endangered Species Act, which winter along the Owyhee River corridor. Mountain quail (*Oreortyx* ***picfus),*** a Category 2 candidate for listing, have been rare in Malheur County for many years. The last recorded observation in the county was in the ACEC in 1981. Alcoves and crevices in the cliff walls provide potential roosting habitat for Townsend's big-eared bat (*Plecotus townsendii*), a Category 2 candidate for listing. Reptile species found in the area include the Mojave black-collared lizard (*Crotaphytus bicinctores*), a Bureau Sensitive species, and the western ground snake (Sonora *semiannulata*), a Bureau tracking species. The white-tailed antelope squirrel (*Ammospermophilus leucurus*) is another Bureau tracking species that has been observed in the ACEC.

Wild Horses

About 12,000 acres (15 percent) of the Three Fingers Wild Horse Herd Management Area (HMA) are within the Leslie Gulch ACEC. Wild or feral horses have used the HMA since the late 1800s. Accounts from the early 1900s estimated over 5,000 feral horses inhabited the general area from Cow Creek on the south, to Adrian on the north, the Owyhee River on the west, and the Idaho state line on the east. Today there are between 75 and 150 wild horses within the 76,933 acre HMA, but wild horses use of Leslie Gulch is currently infrequent.

Other Botanical Resources

Contributing to the biological divisity of the ACEC are two significant sites which support notable examples of botanical communities.

A small disjunct population of ponderosa pine (*Pinus* ponderosa) is found at the southern boundary of the ACEC. The stand occurs on the crest of a ryolitic ridge approximately 70 miles from the nearest ponderosa pine forests. Nearly 100 trees varying in age from seedlings to two trees over 200 years old have been identified. There is no evidence indicating that this is a relict population, and origins from the west or northwest have been advanced. Because of its inaccessibility, the stand shows little to no sign of visitation by livestock or humans.

The Mahogany Ridge RNA is on the northern side of Mahogany Mountain. Much of the RNA shows little use by domestic livestock and is considered to show undisturbed examples of several extensive curl-leaf mountain mahogany ***(Cercocarpus*** *ledifolius)* stands. Several differences in soil types and communities represent variations in which the mahogany can grow. The RNA site appears to be a transition area between mountain mahogany and western juniper (*Juniperus occidentalis*) with a good mosaic of the two species. The area is remote and can be accessed only through cross-country hiking. Management for RNAs is to preserve the identified values in their existing states for research opportunities. All actions associated with this plan will be consistent with this management objective.

Major Management Issues

Activities Affecting Special Status Plants

Grazing

Livestock grazing may impact the relevant and important values of special status plants by trampling the plants and their habitat, and to a lesser extent by consuming the plants. Many of the known plant sites are situated on the lower slopes where cattle usually graze. Some plant sites have well developed trails through them which preclude plant growth due to continuing disturbance and soil compaction.

The 264 AUMs of grazing provided by the Leslie Gulch pasture provides income for the grazing permittees and helps support the customary life style of the local ranching community.

The special status plant populations have survived historic grazing pressures which were heavier than today. It is unknown if historic grazing has caused a reduction in the range of these species. Localized extinctions or population reductions may have occurred on suitable habitat which has been subject to grazing.

Recreation

People may impact the special status plants by trampling them or their habitat. Several of the plant sites are near preferred hiking routes, the main Leslie Gulch Road and the existing Slocum Creek campground. Factors affecting impacts by visitors include the levels and types of recreation and the location of recreational activites relative to the locations of the plant habitat. Promoting visitation to Leslie Gulch or improving recreational facilities to an excessive level could attract too many visitors to the area. Inadequately managed increased visitor use in the area may cause unacceptable impacts to the relevant and important values of the ACEC.

Road Maintanence

At three locations, the Leslie Gulch Road passes through habitat supporting special status plants. The road is maintained on an annual basis, with additional maintenance necessary following sporadic flood events. Maintenance activities disturb habitat, affect seed dissemination, and may uproot plants.

Grazing Impacts To Recreation

Some recreationists object to seeing cattle or their sign, and many have expressed the opinion that cattle should not be in or around developed recreational facilities such as campgrounds.

Acquisition Of Private Inholding

The 40-acre Dago Gulch parcel has the only reliable, accessible water source within the ACEC. There is a cabin on the property and the owner is not required to control noxious weeds. There is no legal public access across this land to Dago Gulch and there is limited control over the type of development which the owner could pursue. Some public opinion favors removing the cabin from the natural setting of Leslie Gulch. BLM is yet to determine if public interest is served best by acquiring ownership of the property or by acquisition of access and scenic easements. The water at the site is extremely important to the California bighorn sheep and is presently available for public use.

Rock Climbing

Several rock climbing routes within Leslie Gulch are of world class quality. All are located within the Wilderness Study Area portions of the ACEC. Climbers have created hand holds and use chalk ***which*** makes the hand holds quite visible. In addition, fixed metallic anchors to support ropes and other hardware are attached to the rock faces, Popular climbing routes can become highly visible and impact the relevant and important scenic values of the area as well as wilderness values,

Noxious Weeds

Three noxious weed species have been found in Leslie Gulch, and other far more aggressive species have been located in nearby areas. Spread of these plants represents the greatest threat to the special status plants and their habitat. Weeds can be spread through movement of domestic and wild animals, by vehicles moving through the area, by the wind, and by general recreational activities including hiking and camping.

Management Alternatives

Ten resource management topics have been identified that require management direction within the Leslie Gulch ACEC. These are the following: Access and Roads, Land Tenure, Minerals, Livestock Grazing, Noxious Weeds, Wild Horses, Special Status Plants, Wildlife, Wildfire, and Recreation.

In this section, three alternatives are presented for each of these resource management topics. Each alternative consists of management actions which may be implemented for that topic. Generally, the Alternative A actions are the most conservative, Alternative B is no change from current management direction, and Alternative C is the most developed approach. The final management prescription for Leslie Gulch could be selected from portions of each these alternatives.

Management Alternatives For Access And Roads

Alternative A

In addition to the existing maintenance practices detailed for the Leslie Gulch road in Alternative B, the following actions would be implemented:

. Two additional parking areas would be developed along the Leslie Gulch Road to reduce traffic congestion and to provide access to portions of the ACEC where no parking now exists. The

Summary Of Management Alternatives By Resource Topic

Resource Topic	Alternative A	Alternative B	Alternatlve C
Access and Roads	•All existing maintenance in Alternative B, plus: •2 additional pullouts/ parking. ● Road maintenance minimized at rare plant sites. Steamboat Ridge route closed; Dago Gulch partially closed. *Public easement or acquisition up Dago Gulch.	*Drainage crossings not improved. *Road maintenance on as needed basis. *Existing road and culvert maintenance. Steamboat Ridge and Dago Gulch routes would remain open on public land, but not be maintained.	All measures in Alternative A except: •4 pullouts/parking. *More extensive road work on drainage crossings. Steamboat Ridge route would remain open, but not be maintained; Dago Gulch partially closed.
Land Tenure	*Pursue acquisition of 40-acre private parcel, or public and scenic easements. •No water development if private parcel acquired.	*Public ownership, public and scenic easements would not be pursued. •No water developments.	•All measures in Alternative A, except water would be piped to Slocum Creek campground if private parcel acquired.
Minerals	•4900 acres removed from locatable mineral development. No mineral leasing or material sales in ACEC.	-Locatable minerals withdrawn. No mineral leases. Salable minerals available outside WSAs.	*Locatable minerals not withdrawn. Leasable and saleable minerals not available.
Livestock Grazing	•No grazing in Leslie Gulch pasture. ● AUMs moved to other pastures. •Drift fence built at ACEC boundary if needed.	*Leslie Gulch pasture grazed with 132 cattle in March and April (264 AUMs). •Other pastures not affected. Cattle trailed in on main access road and trailed out upper Leslie Gulch.	*Leslie Gulch pasture grazed with 88 cattle December through February (264 AUMs). *Other pastures not affected. *Cattle trailed in on abandoned portions of Runaway Gulch road to avoid special status plant site.
Noxious Weeds	*Manual weed control only. •Clean road maintenance equipment before entering ACEC.	*Existing combination of manual and chemical weed control.	*Existing combination of manual and chemical weed control. *Weed free hay required for horses.

Resource Topic	Alternative A	Alternative B	Alternative C
Wild Horses	*Leslie Gulch removed from Horse Management Area.	*Existing Horse Management Area retained.	*Existing Horse Management Area retained.
Special Status Plants	•Trail rerouted in Slocum Creek to avoid rare plant sites. •Other trails around plant sites developed if needed. *Pole fence constructed near Slocum Creek campground if needed. ● O.75 mile of Dago Gulch closed by locked gate.	•No changes in current level of protection, which is limited OHV designation.	•All measures in Alternative A. ● Enclosure constructed around special status plant site near Overlook.
Wildlife	*Bighorn sheep transplant operations based at Slocum Creek campground or BOR lands. *Placement of wormer blocks or other supplements reviewed.	•No limits on bighorn sheep transplant base operations.	•No limits on bighorn sheep transplant operations.
Wildfire	•No earth moving equipment unless extreme fire conditions occur. •No earth moving equipment in cultural or rare plant sites. •IMP provisions apply to WSAs. *Wilderness Management Policy followed if designated Wilderness. *Fire suppression impacts on ACEC values would be monitored.	•All measures as in Alternative A.	•All measures as in Alternative A.
Rock Climbing	•No fixed anchors, artificial handholds, or power tools. •Chalk use discouraged.	*Allow existing fixed anchors, artificial handholds only at Einstein. No power tools. Mitigated chalk use.	*Climbing allowed with BLM approval. Limited power tool use. No new routes or artificial handholds. Mitigated chalk use.
Dispersed Recreation	•Day use only outside developed campground. •No ground/campfires outside developed campgrounds. No use of area vegetation. *Administrative horse use only. •Trails developed if needed.	•Camping and ground fires allowed throughout. *Ground fires allowed. •Horse use allowed. •Site-specific trails would be constructed.	•Camping allowed except within 0.5 mile of roads. •No ground fires. *Horse use allowed on roads and ridges; group size limited. Weed free hay required. *Trails developed if needed.

Resource Topic	Alternative A	Alternative B	Alternative C
Special Use Permits	*Permitted group size limited to 6 persons maximum. •Backcountry access permit system implemented if needed. •No vegetation/rock gathering permits.	*Permits issued on case-by-case basis. *Visitor access not restricted.	*Permits issued on case-by-case basis. •Backcountry access permit system implemented if needed.
Off Highway Vehicle (OHV) Use	*Limited to designated roads. *Steamboat Ridge vehicle route closed. •Dago Gulch road partially closed.	*Limited to existing designated routes.	*Limited to existing designated routes.
Special Designations	•Back Country Byway and Watchable Wildlife designations removed. *Other designations would remain.	• WSA, SRMA, RNA, Back Country Byway, and Watchable Wildlife designations would remain.	• WSA, SRMA, RNA, Back Country Byway, and Watchable Wildlife designations would remain.
Developed Recreation Facilities	*Existing facilities would remain except relocation of one restroom to Dago Gulch or upper Leslie Gulch. •10 campsites provided at Slocum Creek campground. •Day use parking area at Dago Gulch if private land acquired or upper Leslie Gulch if private land not acquired. •No additional potable water.	•All existing facilities would remain. *Additional camp units developed at Slocum Creek campground. •No restriction on vehicle camping outside WSAs. •No additional parking areas. •No additional potable water.	Slocum Creek campground expanded to 15-20 camp units. Potable water and parking developed. •Day use parking with restrooms and equestrian camp site at Dago Gulch. •Day use parking at upper Leslie Gulch. *Added parking, docks, and waste facility at boat launch. •Day use picnic area with foot trail near boat launch. •Day use picnic area at Juniper Gulch.

parking areas would be located at the mouths of small drainages, one in the SW 1/4 of section 2 and one in the SW 1/4 of section 13.

Road width, maintenance practices and design would be analyzed where the Leslie Gulch Road crosses identified rare plant sites to identify opportunities to reduce conflicts with the plants. Road realignment would not be considered.

The Steamboat Ridge vehicle route would be permanently closed and revegetated with native vegetation.

A public easement into Dago Gulch would be pursued if the private land at the mouth of Dago Gulch were not acquired. A locked gate would be installed in Dago Gulch immediately above any facilities to control vehicle access south on the Dago Gulch Road.

Alternative B

- Drainage crossings would not be improved beyond the existing situation. The crossings would be maintained without additional structure to pass most storm runoff events while maintaining road grade.
- Road maintenance would be done only as needed. The road is graded annually and major work is scheduled in response to flood events.
- Outside the special status plant sites, the road maintenance goals would be to retain a graded and drained road prism. Procedures to achieve this would include cleaning of the roadside ditches, backslopes, and crowning of the road surface.
- Culvert maintenance would include tail ditch construction and control of intersecting drainages in accordance with IMP guidance.
- The Steamboat Ridge vehicle route would remain open, but would not be maintained. No new gate would be placed in Dago Gulch.

Alternative C

The measures in Alternative A would be implemented with the following exceptions:

- Four additional parking areas would be constructed along the Leslie Gulch Road to reduce traffic congestion and improve recreational access. In addition to the two parking areas described under Alternative A, a parking area would be located at the mouth of upper Leslie Gulch and one at the mouth of Timber Gulch (NW 1/4 section 14).
- More extensive road work would be allowed on the drainage crossings of the Leslie Gulch Road. This work could include drop structures located below crossings to control headcutting, or short sections of paving of the crossingsthemselves.
- The Steamboat Ridge vehicle route would remain open, but would not be maintained.

Management Alternatives For Land Tenure

Alternative A

- Acquisition of the 40-acre private parcel at the junction of Leslie and Dago gulches would be pursued. A public easement to Dago Gulch and a scenic easement would be optionally pursued.
- Should public acquisition of the land occur, the property would be reclaimed to a natural state by removal of all developments and revegetation with native species. Wildlife water would be made available at the site. No potable water would be made available for public consumption.

Alternative B

- Public ownership, public access or scenic easements would not be pursued on the 40-acre Dago Gulch property. There would continue to be no potable water available on public land.

Alternative C

- The actions described under Alternative A would be pursued, with the following exception: Should the parcel be acquired for public ownership, a portion of the water at Mud Spring would be piped to the Slocum Creek Campground and be treated for public consumption. The pipeline would be buried in the access road. Other options may be considered to supply water to the campground. Adequate water would be made available for wildlife at the spring site.

Management Alternatives For Minerals

Alternative A

- Approximately 4900 acres of the ACEC (including the 40 acre parcel, if acquired) would be withdrawn from locatable mineral activity. These lands were selected to protect the most critical portions of the ACEC while reducing the size of the withdrawal to facilitate the withdrawal process. This action would require an amendment to the Northern Maiheur Management Framework Plan, but would not require Congressional action. The entire ACEC would also be closed to leasable and salable mineral development.

Alternative B

- Locatable minerals would be withdrawn and the ACEC would be closed to mineral leases as recommended in the Northern Malheur Management Framework Plan. Because the area to be withdrawn is larger than 5000 acres, the mineral withdrawal would require Congressional action. Mineral materials (salable minerals) would remain available for development outside of any designated wilderness.

Alternative C

- The ACEC would not be withdrawn from locatable mineral activity, mineral leases or sales. Mining claims could be located and developed in accordance with the Mining Law of 1872 and would follow IMP guidance within the WSAs. This action would require an amendment to the Northern Malheur Management Framework Plan. Any areas Congressionally designated as wilderness would likely be withdrawn from all mineral development activity as part of the wilderness designation process.

Management Alternatives For Livestock Grazing

Alternative A

- The Leslie Gulch pasture of the Three Fingers temporary allotment would have livestock removed. This is the pasture within the ACEC in which the conflicts between livestock and other resources, especially sensitive plants, have been identified. The livestock use would be moved to three other pastures (Saddle Butte, Bannock, and Sulphur Springs Seeding) within the Three Fingers temporary allotment.

- Depending upon monitoring, approximately two miles of drift fence may be necessary to keep cattle from drifting into Leslie Gulch from the adjacent Riverside and Bannock pastures. Any fence would be located so as to minimize impacts to wilderness and scenic values.

This alternative would require an amendment to the Northern Malheur Management Framework Plan.

Alternative B

- Grazing the Leslie Gulch Pasture with 132 cattle during March and April, (264 AUMs) each year would continue.

- The Saddle Butte, Bannock and Sulfur Springs Seeding pastures are grazed from May 1 to October 31, in a deferred rotational grazing system.

- Cattle are currently trailed into the Leslie Gulch pasture on the Leslie Gulch Road and trailed out of the pasture through upper Leslie Gulch.

Alternative C

- Grazing would continue in the Leslie Gulch Pasture with the season of grazing changed to December through February with 88 head of cattle. This would harvest the same number of AUMs (264) as is currently used.

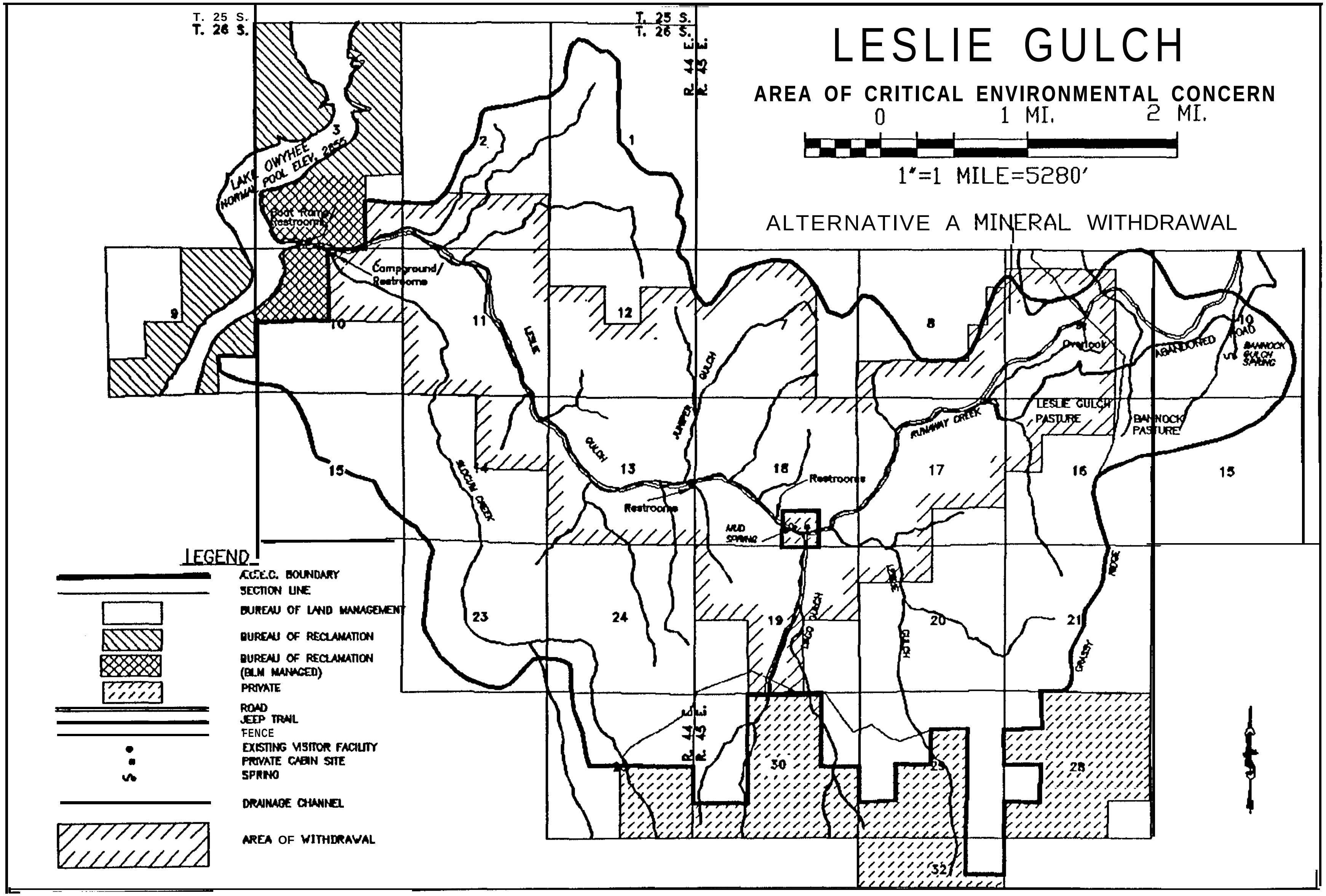
Livestock would be trailed into the pasture over the abandoned portions of the Runaway Gulch Road to avoid a special status plant site.

Management Alternatives For Noxious Weeds

Alternative A

- All weed control in Leslie Gulch would be done manually to reduce the chances of inadvertent spraying of the special status plants.

- Horse use would not be allowed within the ACEC except for administrative purposes. This would reduce the chances of spreading weed seeds into isolated portions of the ACEC.


LESLIE GULCH
AREA OF CRITICAL ENVIRONMENTAL CONCERN
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1"=1 MILE=5280'
ALTERNATIVE A MINERAL WITHDRAWAL
T. 25 S.
T. 26 S.
R. 44 E.
R. 45 E.
LAKE OWYHEE
NORMAL POOL ELEV. 2655
Boat Ramp/Restrooms
Campground/Restrooms
Restrooms
Overlook
MUD SPRING
LESLIE GULCH PASTURE
BANNOCK PASTURE
BANNOCK GULCH SPRING
ABANDONED ROAD
RUNAWAY CREEK
JUNIPER GULCH
SLOCUM CREEK
LEGEND
A.C.E.C. BOUNDARY
SECTION LINE
BUREAU OF LAND MANAGEMENT
BUREAU OF RECLAMATION
BUREAU OF RECLAMATION (BLM MANAGED)
PRIVATE
ROAD
JEEP TRAIL
FENCE
EXISTING VISITOR FACILITY
PRIVATE CABIN SITE
SPRING
DRAINAGE CHANNEL
AREA OF WITHDRAWAL

- Road maintenance equipment would be cleaned with high pressure water prior to being used in the ACEC to reduce the potential for introduction of weed seeds.

Alternative B

- The existing combination of manual and chemical control methods would continue to be utilized.
- Unlimited recreational horse use would continue.
- Road maintenance equipment would not be cleaned.

Alternative C

- In addition to continuing the existing combination of manual and chemical weed control methods, weed-free hay would be required of anyone using horses within the ACEC.
- Road maintenance equipment would be cleaned prior to moving into the ACEC to reduce the potential for introduction of weed seeds.

Management Alternatives For Wild Horses

Alternative A

- Leslie Gulch ACEC would be removed from the Herd Management Area. Any wild horses that move into the ACEC would be gathered and removed. This action would require an amendment to the Northern Malheur Management Framework Plan.

Alternative B

- The existing wild horse management plan would continue, with wild horses allowed to use the Leslie Gulch ACEC as part of their range.

Alternative C

- The existing wild horse management plan would continue, with wild horses allowed to use the Leslie Gulch ACEC as part of their range.

Management Alternatives For Special Status Plants

Alternative A

- Site-specific trail segments would be developed in Slocum Creek to avoid special status plant sites. Other trails would be developed around identified plant sites if monitoring indicates a need.
- A pole fence would be constructed at the plant site adjacent to the Slocum Creek campground should monitoring indicate a need.
- A locked gate would be installed in Dago Gulch immediately above any developed facilities to control vehicle access to the special status plant sites along the Dago Gulch Road.

Alternative B

- Under current management, special status plants receive some level of protection from off the highway vehicle designation and IMP guidance for WSAs. Vehicular impacts are controlled by the "limited" OHV designation.

Alternative C

- In addition to the provisions of Alternative A, an exclosure would be constructed to protect a special status plant site near the overlook from livestock. Other exclosures would be constructed around special status plant sites if monitoring indicates a need.

Management Alternatives For Wildlife

Alternative A

- Bighorn sheep transplant operations would only be based at the Slocum Creek campground or on Bureau of Reclamation lands along the Owyhee Reservoir.
- Any wormer blocks or feed supplement placements for the bighorn sheep would be reviewed to evaluate impacts to ACEC values.

Alternative B

- Locations of areas used for bighorn sheep transplant base operations would be limited only by IMP considerations. Slocum Creek campground has been used in the past.

Alternative C

- Locations of areas used for bighorn sheep transplant base operations would be limited only by IMP considerations. Slocum Creek campground has been used in the past.

Management Alternatives For Wildfire

Alternative A

The existing Vale District Fire Management Activity Plan would continue to govern fire suppression activities throughout the Vale District.

- Earth-moving equipment would not be used unless a fire has flame lengths of six feet or more (extreme fire conditions) without Area Manager approval .

- No earth-moving equipment would be utilized on any identified special status plant site or archaeologically significant area.

- IMP guidance would be followed within the Wilderness Study Area portions of the ACEC. If the areas are designated Wilderness, then Wilderness Management Policy would be followed.

. Naturally occurring fires would not be used for resource enhancement (e.g.,
sagebrush control) except where flame length is less than two feet.

Alternative B

The existing Vale District Fire Management Activity Plan would continue to govern fire suppression activities throughout the Vale District.

Alternative C

The existing Vale District Fire Management Activity Plan would continue to govern fire suppression activities throughout the Vale District.

Management Alternatives For Recreation

All Alternatives

The following management actions would apply under all recreation
alternatives:

- The Memorandum of Understanding between the Bureau of Land Management and the Bureau of Reclamation would be retained and revised as needed.

- The lockable gate at the overlook at the head of Runaway Gulch would be retained to close the ACEC, if necessary, for public safety reasons.

- A Sign Plan would be developed for the ACEC for the placement of safety, directional and interpretive signs. A brochure about the Leslie Gulch area would be provided.

- Handicapped access would be provided at selected developed facilities.

- Shooting restrictions would be enforced around developed facilities for public safety.

- There would be no organized competitive or commercial rock climbing, and no new alteration of natural hand/foot holds; Temporary rock climbing hardware would not be left on walls; and BLM approval would be required for maintenance or removal of fixed anchors and other artificial constructs.

Alternative A

Rock Climbing

- Rock climbing with fixed anchors or artificially constructed hand holds would be precluded within the ACEC. Power tools would not be permitted and chalk use would be discouraged.

Dispersed Recreation

- All recreational activities would be limited to day use only. Camping and ground fires would be restricted to the Slocum Creek campground.

- Recreational horse use would not be allowed within the ACEC.

- Trails would be developed if monitoring indicates a need.

Special Use Permits

- Any activity requiring a permit would be limited to a maximum of six persons.
- Vegetation or Rock Gathering Permits would not be issued.
- A backcountry visitor access permit system would be implemented if monitoring indicated a need for the protection of resource values.

Off-Highway Vehicle (OHV) Use

- The present Limited OHV use designation would remain in effect for designated roads (Runaway Creek/Leslie Gulch and Dago Gulch). The Steamboat Ridge vehicle route would be closed. Vehicle access to Dago Gulch would be consistent with the private right-of-way and controlled with a locked gate located immediately above any developed facilities. The remainder of the ACEC would remain closed to off-road vehicle use.

Special Designations

- The Back Country Byway and Watchable Wildlife designations would be removed to reduce promotion of visitation to the ACEC. The Wilderness Study Area, Special Recreation Management Area, and Research Natural Area designations would be retained.

Developed Recreation Facilities

- Existing facilities would remain unchanged, except the restroom adjacent to the private parcel would be moved to Dago Gulch if the private land there is acquired by the BLM. Optionally, the restroom would be placed at upper Leslie Gulch. A day use parking area would also be developed at the mouth of Dago Gulch if the private land is acquired or at the mouth of upper Leslie Gulch if the land is not acquired.
- Ten campsites would be developed at the Slocum Creek campground within the existing campground area.
- No potable water would be made available.

Alternative B

Rock Climbing

- Existing fixed anchors and constructed hand holds would be allowed only at the Einstein climbing site in upper Leslie Gulch. Climbers would remove or mitigate existing fixed hardware and hand holds in other areas. Power tools would not be allowed, and chalk use would be mitigated. Group size and frequency of site-specific use would be limited if monitoring indicates a need for protection of resource values.

Dispersed Recreation

- Camping and ground fires would be permitted throughout the area. Down and dead vegetation could be used for campfires.
- Horse use would be allowed throughout the area.
- Site-specific trail segments would be constructed to protect sensitive resource values.
- The Owyhee Breaks trailhead for hiking would not be established.

Special Use Permits

- Special Recreation Use Permits, Land Use Permits and Vegetation/Rock Gathering permits would be issued on a case-by-case basis consistent with management of ACEC values and IMP guidance.
- No visitor access permit system is planned for this alternative.

Off-Highway Vehicle (OHV) Use

- The present vehicle use designation would remain as Limited to designated routes (Runaway/Leslie Gulch, Dago Gulch, and Steamboat Ridge only). All other areas would remain closed to off-highway vehicle use.

Special Designations

- The Wilderness Study Area, Special Recreation Management Area, Research Natural Area, Back Country Byway, and Watchable Wildlife designations would be retained.

Developed Recreation Facilities

- All existing developed day use and camping facilities would remain, and additional specific

camp units with tables and grills would be developed at Slocum Creek campground within the existing campground area.

- No additional parking areas or potable water would be developed,

- There would be no restriction on vehicle camping outside the WSA boundaries,

Alternative C

Rock Climbing

- Existing fixed anchors would remain. Existing partially completed climbing routes may be completed with BLM approval, but no new climbing routes would be allowed. Measures to minimize resource impacts and public hazards would be enforced. Additions at the Einstein site would not be allowed. The use of power tools would be allowed in WSAs with BLM approval, but not in designated wilderness areas. Chalk use would be mitigated. Group size and frequency of the site-specific use would be limited if monitoring indicates a need to protect resource values.

- Rock climbers would be directed away from known raptor nests or bat roosting sites.

Dispersed Recreation

- Camping would be allowed throughout the ACEC except within 0.5 mile of the Leslie Gulch Road. Backcountry campsites would be designated if monitoring indicates the need to protect resource values.

- Vegetation gathering for camp fire fuel would not be permitted. Camp fires would be limited to the grills provided at the Slocum Creek campground.

- Horse use would be allowed on roads and ridges with limits placed on group sizes. Weed-free hay would be required.

- Short trail segments would be developed to protect resource values if monitoring indicates a need.

- An Owyhee Breaks Trailhead would be developed in conjunction with one of the vehicle parking areas.

Special Use Permits

- Special Recreation Use Permits, Land Use Permits and Vegetation/Rock Gathering permits would be issued on a case-by-case basis consistent with ACEC values and IMP guidance.

- A visitor access permit system would be implemented if monitoring indicated a need to protect resource values.

Off-highway Vehicle (OHV) Use

- The vehicle use designation would remain as Limited to existing roads (Runaway/Leslie Gulch, Dago Gulch and Steamboat Ridge). The remainder of the ACEC would remain closed to off-highway vehicle use.

Special Designations

- The Wilderness Study Area, Special Recreation Management Area, Research Natural Area, Back Country Byway, and Watchable Wildlife designations would be retained.

Developed Recreation Facilities

- Should any Congressional wilderness designation permit, Slocum Creek campground would be expanded and then developed to contain 15 to 20 designated camping units outside of any wilderness. Potable water would be available at the site, and day use parking would be constructed. Camping with horses would be permitted only at a Dago Gulch designated equestrian campsite.

- Dago Gulch would have a day use parking site, a restroom and an equestrian campsite. Parking would also be provided at upper Leslie Gulch.

- The Owyhee boat launching facility would have additional parking, docks and a waste disposal facility for river floaters.

- Additional recreational facilities would be developed at the hill south south of the Owyhee boat launch to include a day use picnic area with four to six tables/grills and a foot trail. Also, a single picnic table/grill would be provided at the mouth of Juniper Gulch.

Management Alternatives Not Analyzed

Total closure of Leslie Gulch by locking the gate near the overlook and allowing access only by permit could reduce many of the identified resource conflicts. This alternative is not considered further since actions proposed in the alternatives analyzed would provide adequate protection for the relevant and important values of the ACEC.

Suspension of livestock use for several years could permit evaluation of the effects of grazing on special Status species and their habitat. This alternative is not viable because it would have a similar impact to the grazing permittees as total removal of grazing from the Leslie Gulch Pasture.

Livestock impacts to special status plant sites could be controlled by fencing all of the identified plant sites. This alternative would require a large amount of fence and would not conform with IMP guidance or visual resource management.

The alternative to increase livestock grazing in the Leslie Gulch pasture from the current 264 AUMs to the 946 AUM carrying capacity was considered but is not analyzed in detail. Increased livestock grazing would not be compatible with the relevant and important values identified within the ACEC.

Resource Management Topics

In this section, each of the resource management topics is considered individually. A narrative describes the factors which influence management prescriptions, and an analysis is then made of the anticipated impacts of each alternative on that topic. To enable tracking of the origin of a particular action, a topic heading is added to blocks of potential actions in each alternative. Monitoring needs for each topic are also listed in this section.

Access And Roads

Factors Which Influence Management Prescriptions

The Leslie Gulch Road has a 200-foot wide public right-of-way which protects public access. Where the road crosses the 40-acre private parcel at the junction of Leslie and Dago Gulches, a 100-foot wide perpetual easement has been retained for public access.

The Leslie Gulch Road was inadvertently constructed through several special status plant sites. When the present road was constructed in 1969, the significance of these plant populations unknown. Annual road maintenance and the disruption of surface water flows by the road may be impacting plants within these sites.

A private right-of-way across public land has been granted for the road in Dago Gulch. This right-of-way is a nonexclusive, nonpossessory right-of-way which provides legal access for the owner of the private lands at the head of Dago Gulch. Although this road connects physically with the Leslie Gulch Road, there is no legal public access across the private land at the mouth of Dago Gulch. The few hundred feet of Dago Gulch road across this private parcel could legally be closed to the public by the private landowner.

The primitive road along the top of Steamboat Ridge once provided access to a horse trap that was used for gathering wild horses. The trap has not been used for many years. This route leaves the Leslie Gulch Road near the overlook and crosses approximately 0.25 mile of the ACEC before following the ridge top for several miles. This is not a constructed road and has no right-of-way or easement. Current use is limited to providing recreational access for hunters during big game season. Trespass vehicle use is spreading from this route into the Honeycombs WSA. The steep grade of the road is causing accelerated soil erosion.

Impacts Of Alternatives On Access And Roads

Alternative A

Access and Roads

. Addition of two parking areas would reduce road congestion and improve backcountry access along the Leslie Gulch Road. Road congestion would be significantly reduced at upper Leslie Gulch which now receives occasional heavy use, should parking be provided there or at Dago Gulch.

- Where the Leslie Gulch Road passes through identified special status plant sites, alternative road maintenance practices could result in a rougher, less passable road for short distances. The extent of this change would be dependent upon the specific modifications to maintenance which are implemented; however, the road would remain passable for highway vehicles.

- There would be no vehicle access to Steamboat Ridge. The small amount of soil erosion which is occuring along the road would decrease over time.

Land Tenure

- Acquisition of ownership or public easement of the Dago Gulch private parcel would guarantee public access to Dago Gulch.

Special Status Plants

- Should public access be acquired into Dago Gulch, the added locked gate in the gulch would remove public vehicle access to approximately 0.75 mile of road.

Recreation

- Removal of all sport rock climbing from the ACEC would reduce congestion at the upper Leslie Gulch parking area and remove the distraction that rock climbers present to drivers on the road. This would enhance the quality of sightseeing for motorists.

- The Leslie Gulch Road and developed facilities would be available to vehicle use.

Alternative B

Access and Roads

- With no new parking areas, road congestion and back country access would not be improved under this alternative.

- The Steamboat Ridge Road would remain open to general public vehicle use; Slightly accelerated soil erosion would continue along the Steamboat Ridge road. Legal vehicle access to public lands in Dago Gulch would not be available.

Land Tenure

- The owner of the 40-acre parcel at Dago Gulch could legally close public access to Dago Gulch. Without this legal access, the public would not have a means to visit public lands in Dago Gulch, except by hiking over excessively steep terrain or by back country access.

Special Status Plants

- Since public vehicle access to the lower 0.75 mile of the gulch would remain, there would be increased potential for impacts to special status plants along the road.

Recreation

- Eliminating rock climbing from the Asylum site would remove this distraction to motorists. The road corridor's natural setting would also be enhanced. There would be some parking congestion and damage to vegetation at the upper Leslie Gulch trailhead area due to continued use of the "Einstein" site.

- Under the Limited OHV designation, there would be public vehicle access over the Leslie Gulch, Dago Gulch, Steamboat Ridge roads and all developed facilities. This designation would continue to preclude OHV use on all other areas of the ACEC.

Alternative C

Access and Roads

- The addition of four parking areas would improve road congestion and back country access more than the other alternatives.

- The more extensive improvements proposed for the drainage crossings under this alternative would improve the quality of access along the road. These improvements could also reduce the amount of road maintenance necessary at the crossings.

Special Status Plants

- The added locked gate in Dago Gulch would remove public vehicle access to approximately 0.75 mile of road.

Recreation

- Rock climbing activity viewed by motorists driving along the Leslie Gulch Road could distract drivers and disrupt to the natural setting.

- Under the Limited OHV designation, there would be public vehicle access over the Leslie Gulch, Dago Gulch, Steamboat Ridge roads and all developed facilities. This designation would continue to preclude OHV use on all other areas of the ACEC.

Land Tenure

Factors Which Influence Management Prescriptions

Potential acquisition of private lands by the BLM must be consistent with the prescribed mission of the agency. Protection of the naturalness of the wilderness study areas and the Relevant and Important value of high quality scenery dictates analyzing characteristics of adjacent lands which might conflict with these values. The existence of structures immediately adjacent to the three wilderness study areas within the otherwise mostly natural setting of the ACEC conflicts with wilderness and scenic values.

Impacts Of Alternatives On Land Tenure

Alternative A

- Public acquisition of the 40-acre parcel at Dago Gulch would reduce the Malheur County tax base by approximatly $350.00.

Alternative B

- Malheur County would continue to collect the approximatly $350.00 in property taxes from the owner of the 40-acre private parcel.

Alternative C

- Public acquisition of the 40-acre parcel at Dago Gulch would reduce the Malheur County tax base by approximatly $350.00.

Minerals

Factor Which Influence Management Prescriptions

Although there are presently no mining claims within the ACEC, the area is currently open for the location of mining claims. Under the Interim Management Policy and Guidelines for Lands under Wilderness Review, mineral exploration and development on mining claims within Wilderness Study Areas, as with all activities, is regulated to protect wilderness values. Since October of 1990, no surface disturbing work which would require reclamation has been allowed within WSAs in Oregon. Any Congressionally designated wilderness would likely be withdrawn from locatable, leasable and salable mineral activity.

In the portions of the ACEC which are outside of the Wilderness Study Areas, claims can be located and mineral development could proceed as provided for in the General Mining Law of 1872. Development of the these claims would be regulated by the 43 CFR 3809 regulations to eliminate unnecessary and undue degradation of the federal lands. Claimants would have the basic right to pursue development of the claims.

The Northern Malheur Management Framework Plan states that a protective withdrawal from locatable mineral activity is to be secured for the Leslie Gulch ACEC. This withdrawal would remove 11,900 acres from mine claim location or development activity under the General Mining Law of 1872. Existing claims would then be subjected to validity examinations if development work were proposed following the withdrawal. This withdrawal would require Congressional action to implement since it is in excess of 5,000 acres. The MFP also states that the 11,900 acre ACEC would be closed to mineral leasing.

The area is currently open for development of salable mineral resources. The National Environmental Protection Act requires that a Categorical Exclusion or Environmental Assessment be completed prior to any proposed gravel or rock removal activity on the public lands. In Leslie Gulch this document would analyze the potential for impacts to the unique values found in the area.

Impacts Of Alternatives On Minerals Management

Alternative A

Land Tenure

- Public acquisition of the 40-acre private parcel would make these lands available for the same minerals management direction as the remainder of the ACEC. Under this alternative, this parcel would be withdrawn from all mineral activity.

Minerals

- Approximately 7,000 acres of the ACEC would be available for locatable mineral development. Until Congressional action, the Wilderness Study Area portions of the ACEC remain regulated by IMP guidance.

Alternative B

Land Tenure

- With no public acquisition of the 40-acre private parcel, mineral values would remain controlled by the landowner and available for development.

Minerals

- Salable minerals only would be available for development outside any designated wilderness areas. Any proposal for development would be analyzed for impacts to the identified values within the ACEC, and impacts would require mitigation should a proposal be approved. Salable mineral development is unlikely within the ACEC.

Alternative C

Land Tenure

- Public acquisition of the 40-acre private parcel would make these lands available for the same minerals management direction as the remainder of the ACEC. This parcel would be partially within each of the three WSAs if acquired.

Minerals

- All mineral values within the ACEC would remain available for development outside any designated wilderness areas. Although mining claims could be staked, any development activity would be regulated by IMP within the WSA portions of the ACEC.

Monitoring Needs

Portions of the ACEC remaining open for mineral development would require monitoring of any proposed activity. Mining claim activity is regulated to prevent unnecessary or undue degradation of the public lands. Mineral leases and sales have stipulations attached to minimize or eliminate impacts to other resources. BLM personnel would monitor activity to insure compliance with regulations and applied stipulations.

Livestock Grazing

Factors Which Influence Management Prescriptions

Regulation of grazing began with passage of the Taylor Grazing Act in 1934, which has been amended with various laws and regulations, including the National Environmental Policy Act, Federal Land Policy and Management Act, and the Public Rangeland Improvement Act.

Livestock use was limited (adjudicated) to carrying capacity in this area, known as the Mahogany Planning Unit in the early 60s. The adjudication reduced the ative grazing preference by 33 percent This reduction was put into a suspended, non-use state.

The latest land use planning was completed in 1984 with the Southern Malheur Grazing Environmental Impact Statement (EIS) and Rangeland Program Summary (RPS). In those plans livestock use was allocated and objectives were set specifically by pasture for the EIS area, which included the pastures within the ACEC. The pastures within the ACEC were identified as Leslie Gulch and Bannock within the Mahogany allotment (0500). The allotment at that time contained 327,129 federal acres, and grazing preference was allotted at 34,848 AUMs.

In 1984 the Mahogany allotment was divided into five permanent and six temporary allotments. A 1988 decision to make the temporary allotments permanent is currently under appeal. The Bannock and Leslie Gulch pastures are within the Three Fingers temporary allotment which has 9,981 active and

4,653 suspended AUMs with four grazing permittees. Currently the two pastures are used by two of the permittees, Bud Greeley and Delbert Allison,

Livestock actual use records for the area exist since 1973. At that time the Leslie Gulch pasture was considered a part of the Riverside pasture, adjacent to and immediately north of the Leslie Gulch pasture. The two pastures are divided only by natural barriers, and a small amount of livestock movement can take place between the two pastures, Use from 1973 until 1979 in the two pastures was with up to 1400 cattle and 3500 AUMs, between April and December. In 1979, Leslie Gulch was recognized as a separate pasture and livestock use was greatly reduced. Present use of the Leslie Gulch pasture is 132 cattle with 264 AUMs from March 1 to April 30.

The Bannock pasture is used by approximately 450 cattle from May 1 to October 31 in a deferred rotation grazing system with three additional pastures, with use being deferred after the critical growth period of key forage species (approximately July 1) two out of three years.

An allotment evaluation completed in 1990 estimated the livestock carrying capacity in Leslie Gulch pasture at 948 AUMs and Bannock pasture at 928 AUMs. Trend of upland vegetation was improving in the Bannock pasture and not apparent for the Leslie Gulch pasture. Utilization studies of key forage species have been conducted in the Leslie Gulch pasture since 1985, with the highest recorded utilization of key forage species being 16 percent. Utilization studies in the Bannock pasture from 1978 to 1989 indicated the average utilization of key forage species was 39 percent.

Impacts Of Alternatives On Livestock Grazing

Alternative A

Livestock Grazing

- The livestock operators would be required to alter their operations by finding alternative feed and pasture for the 132 cattle from March 1 to April 30. This cost would be offset by the saving of feed and pasture costs for the September and October grazing period under this alternative.

- The potential for activation of suspended AUMs held by these and other permittees in the allotment would be decreased by the 264 AUMs that would be shifted to other parts of the allotment because of the loss of use of this pasture. The possibility of future reductions in active preference would be increased as a result of a loss of the use of this pasture and the increased use in the other parts of the allotment.

- The lower seral vegetative conditions of the bottom areas near the Cwyhee Reservoir should improve over time due to the restricted period of use and the low utilization levels of key perennial forage species. The rate of improvement may be slightly slower than under Alternatives A or C.

Alternative B

Livestock Grazing

- This alternative would not affect the present livestock operations.

- The lower seral vegetative conditions in lower canyon bottom sites should improve over time due to the current low utilization levels of key perennial forage species. The rate of improvement would be lower than under alternatives A and C.

Alternative C

Livestock Grazing

- The livestock operators would be required to alter their operations by finding alternative feed and pasture for the 132 cattle from March 1 to April 30. This cost would be offset by the saving of feed and pasture costs for the 88 head of cattle that would graze the pasture from 12/1 to 2/28. The other permittees in the allotment would not be affected.

- The lower seral vegetative conditions of the bottom areas near the Owyhee Reservoir should improve over time due to low utilization levels of key perennial forage species and due to grazing during the dormant season of these species.

Monitoring Needs

Trend studies would be established within the ACEC to determine changes in plant composition in areas used by livestock. Forage utilization data and livestock use data would be continued to be collected annually to determine pattern and amount of vegetation removed by grazing animals. Use supervision of grazing and monitoring for unauthorized use including drift of livestock from the adjacent Bannock and Riverside pastures would continue.

Noxious Weeds

Factors Which Influence Management Prescriptions

Noxious weeds present a substantial threat to all plants, including the special status species and their habitats. These exotics, capable of growing on a wide variety of soil types, are aggressive competitors, eliminating or replacing native vegetation. Three noxious weeds have been identified in the Leslie Gulch ACEC: Scotch thistle (*Onopordum acanthium*), whitetop (*Cardaria draba*) and St.-John's wort (*Hypericum perforatum*). Invading biennial Scotch thistle has been found in road corridors from the overlook to the Owyhee Reservoir; five sites of the perennial, rhizomatous whitetop are established adjacent to the Leslie Gulch Road with the colonies beginning to extend into native vegetation. Within the past five years, increasing numbers of both of these species have been observed along the roadways east of the ACEC. St. John's wort has been found at one site in Slocum Creek and at one site near Mud Spring. Biological controls have not been found for whitetop or Scotch thistle. A beetle is used to control severe infestations of St. John's wort. Potential invasion by other species, such as the knapweeds (*Cenfaurea* spp.) and yellow starthistle (*Cenfaurea solstitialis*), presents additional threats to native plants.

Limited chemical control (spraying) of Scotch thistle has occurred at the overlook, and all three noxious weed species have been manually removed during the past two field seasons. A Pesticide Use Permit (PUP) has been developed by the Vale District for Leslie Gulch which permits limited chemical control of noxious weeds from the overlook site to the Owyhee Reservoir under the purview of a botanist or individual designated by the botanist. This PUP has been developed in accordance with the Northwest Area Noxious Weed Control Program EIS Supplement dated 05/05/87.

Manual control methods are somewhat effective for controlling scattered individuals of noxious weeds. In dense stands or when the weed species spread by rhizomes, manual control methods are much less effective. Generally, the most effective control is a combination of spraying when the plants are green and manual removal of any developed seed heads. Extensive and dense stands of noxious weeds make manual control extremely costly and ineffective. In these situations, the most satisfactory mode of control includes site-specific, carefully-controlled spraying in the spring. For whitetop, chemical application when the plants are green and budding, but prior to bloom, so that the herbicide can be translocated into the rhizomes, is most effective. Manual control of scattered Scotch thistle and St. John's wort is effective.

Impacts Of Alternatives On Noxious Weeds

Alternative A

Access and Roads

- Additional parking areas would remove native vegetation and provide a disturbed habitat for colonization by weeds.
- Closure and successful rehabilitation of the Steamboat Ridge vehicle route would eliminate the open niches favorable to weed establishment.

Land Tenure

- With acquisition of the 40-acre private parcel, aggressive weed control activities could be pursued by the BLM on the land.

Minerals

- any mineral exploration or development on approximately 7,000 acres may disturb native vegetation and create open areas available for colonization by weeds. No disturbance to native vegetation would occur on the approximately 4,900 acres withdrawn from locatable mineral activity.

Noxious Weeds

- Manual weed control alone has limited effect in controlling noxious weeds. Difficulty of removing by hand all the rhizomes of whitetop and other rhizomonous species reduces the effectiveness of this method when compared to a combination of manual and chemical control methods.

Livestock Grazing

- With livestock removal from the Leslie Gulch pasture, the lower seral vegetative conditions of the bottom areas near the Owyhee Reservoir may again support perennial native grasses, thus helping to eliminate open niches where weeds may colonize.

- The potential for livestock transport of weed seed would be eliminated.

Wild horses

- Removal of wild horses from the ACEC would eliminate the potential for weed seed transport by these animals.

Recreation

- Restricting permitted group size to a maximum of 6 persons would reduce the potential of these activities to spread noxious weed seeds.

- Eliminating recreational horse use would help reduce dissemination of weed seeds from existing sites, as well as eliminate the transportation of new invaders into the area through hay and animal transport.

- Removal of the Back Country Byway and Watchable Wildlife designations and the limited recreational development would reduce the number of visitors to the ACEC and reduce the potential for the spread of noxious weeds under this alternative.

Alternative B

Access and Roads

- Continued use of the Steamboat Ridge road would increase the potential for colonization of noxious weeds along the road.

Land Tenure

- Much of the 40 acre parcel is in a highly disturbed and presents fine habitat for establishment of exotic species. If this parcel is not acquired, and the land owner does not control noxious weeds, weeds on this land could provide a significant weed seed source for adjacent areas of the ACEC.

- No disturbances would occur to the land from locatable mineral activity, resulting in no new niches becoming available for colonization by noxious weeds.

Noxious Weeds

- The combination of manual and chemical control methods should be effective in controlling noxious weeds.

Livestock Grazing

- Continuation of Current grazing practices should result in improved vegetative conditions in the bottom land areas near the Owyhee Reservoir. This improvement would help reduce weed invasion over time, but the rate of improvement would be the slower under this alternative than under the other two.

- The potential for livestock transport of weed seeds would continue.

Wild horses

- The potential for wild horses to transport weed seeds within the ACEC would continue.

Recreation

- With no controls on the size of permitted group activities, these groups would have a larger potential for spreading noxious weed seeds under this alternative.

- With no control over horse use, noxious weed seeds could be brought into the area in hay or through the horses themselves.

- Retention of the Back Country Byway and Watchable Wildlife designations would likely attract more visitors to the area and increase the potential for noxious weed spread under this alternative.

Alternative C

Access and Roads

- Additional parking areas would remove native vegetation and provide a disturbed habitat for colonization by weeds.

- The Steamboat Ridge road would remain open for colonization of noxious weeds.

- More extensive road maintenance work also would contribute to opening new sites for establishment of weeds.

Land Tenure

- With acquisition of the 40-acre private parcel, weed control activities could be pursued by the BLM on the land.

Minerals

- All sites disturbed from locatable mineral activities would present fresh surfaces available for colonization by weeds.

Noxious Weeds

- The combination of manual and chemical control methods should be effective in controlling noxious weeds.

Livestock Grazing

- Changing the season of grazing to winter should improve vegetative conditions of the bottoms near the Owyhee Reservoir. These areas would then be less susceptible to weed invasion, but the conditions would not improve as rapidly as under Alternative A.

- The potential for livestock transport of weed seeds would continue.

Wild horses

- The potential for wild horses to transport weed seeds within the ACEC would continue.

Recreation

- With no controls on the size of permitted group activities, these groups would have a larger potential for spreading noxious weed seeds under this afternative.

- Limiting hay use to certified weed-free hay would help in reducing introduction of new weeds in the ACEC, but the possibility of weed introduction through horses would not be totally eliminated.

- Retention of the Back Country Byway and Watchable Wildlife designations and the increased recreational developments proposed under this alternative would likely attract more visitors to the area and increase the potential for noxious weed spread.

Monitoring Needs

Effectiveness of the various control methods on elimination and/or control of existing populations of noxious weeds would be monitored. Annual assessments of rate of spread and occurrences of existing and new exotic species in the canyons would be made also.

Wild Horse Management

Factors Which Influence Management Prescriptions

The Wild Horse and Burro Act of 1971 provided for the management and protection of wild horses. The Three Fingers Herd Management Area was established as a result of that act with current boundaries and numbers established in the Northern Malheur Management Framework Plan of 1983. This plan provided for maintaining between 75 and 150 wild horses.

Wild horses are inventoried annually, provided funding is available. Currently the horse use occurs outside of the ACEC with little or no use within the ACEC. Historically significant use by wild horses took place within the ACEC, and a horse trap site was located in Juniper Gulch with over 200 horses being gathered from the area in the late 1960s.

Impacts Of Alternatives On Wild Horses

Alternative A

- Removing the Leslie Gulch ACEC from the HMA would have few, if any, impacts because the horses are not presently utilizing the portion of the herd area within the ACEC. The horses have been observed within 0.25 mile of the ACEC in recent times, and it is probable that they would move into the ACEC in the future as this historically was horse range. Horses that move into the ACEC would be removed initially by moving the horses from the ACEC back into the HMA. If the horses were to return, they would have to be gathered and either moved to other herd areas or put up for adoption.

Alternative B

- There would be no change to the existing situation. Wild horses would continue to be allowed to use the ACEC.

Alternative C

- There would be no change to the existing situation. Wild horses would continue to be allowed to use the ACEC.

Monitoring Needs

The ACEC will be monitored to determine if and when horse use begins. Outside the ACEC, within the HMA, horse herd populations, annual forage utilization and vegetation trends would continued to be monitored.

Special Status Plant Species

Factors Which Influence Management Prescriptions

At least five special status plant species are found in concentrated numbers in the ACEC. Table I in Appendix 1 shows the federal candidate species being considered for listing under the Endangered Species Act, the number of acres of their habitat in the Leslie Gulch ACEC, and the total number of habitat acres for the entire species range.

Ertter's groundsel is an annual species, initiating growth in early spring and completing its life cycle by the end of November. Its global distribution is limited to the Leslie Gulch vicinity and to two small sites near Birch Creek, approximately six miles southwest of Leslie Gulch. Suitable habitat sites have been surveyed in the Honeycombs to the north, but only one site has been found. Little potential habitat remains to be explored for the species, and it is anticipated that at least 90 percent of the plant sites have been identified. Numbers of plants vary dramatically based on timing and amount of rainfall in the area.

Packard's blazing star also is an annual species, with its life cycle generally completed by late June. It grows on the same loose talus rubble as Ertter's groundsel but only on the lower slopes and more gentle fans which spread out at the base of the talus runs. Outside of Leslie Gulch, only a single site in northern Nevada is known for this species. Very little potential habitat remains to be examined for Packard's blazing star, and the likelihood of additional site discoveries is slim.

Grimy ivesia, a perennial herb, grows on five discrete sites in the Vale District, three of which are in the Leslie Gulch ACEC. One other small site is known from Lake County, and two sites have been identified in northern Nevada. In spite of it's fairly wide distribution, the species is extremely rare. It is restricted in our region to barren outcrops of Leslie Gulch Ash-Flow Tuff with two to three inches of rubble on top, a harsh site with little rooting depth. Inventories to locate more populations have been unsuccessful.

Owyhee clover grows on scattered sites in the Leslie Gulch ACEC, and also outside the area. All are found east of the Owyhee Reservoir. Little is known about this species, and it is anticipated that more sites will be located with intensive inventory. Succulent legumes such as this are palatable to herbivores.

Of the special status species in the Leslie Gulch ACEC, sterile milk-vetch is the most wide-spread geographically and in terms of known numbers and number of sites, although it is endemic to the Owyhee Region. It occupies loose ash sites of varying colors and textures. An extensive inventory for the species has been conducted east of the Owyhee Reservoir, and more sites are anticipated to be found when a similar inventory can be conducted west of the reservoir.

None of the special status plant species in Leslie Gulch are listed as either endangered or threatened under the Endangered Species Act of 1973. However, as candidate species, five of the species are managed under BLM policy which states that 'The BLM . . . shall ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as Threatened or Endangered." (BLM Manual 6640.06-C)

Impacts Of Alternatives On Special Status Plants

Alternative A

Access and Roads

- Road maintenance impacts special status plant sites along the road which are already in a disturbed state due to past road construction. A few plants continue to occupy this disturbed area yearly. Opportunities to minimize borrow ditch maintenance at two locations where Ertter's groundsel is found may help prevent loss of plants at those sites and may result in establishment of more plants at these sites. If the road is outsloped where the road has disrupted deposition of talus outwash any outwash will pass over and form new habitat downstream of the road, rather than diverting water down the roadside ditch. Seeds of the special status species would flow unrestricted into the habitat.

- The two parking areas proposed for construction could benefit rare plant habitat elsewhere by dispersing recreational use in the canyon. The parking area closest to the Owyhee Reservoir could direct dispersed hiking into some areas of known plant habitat. Damage to rare plants and habitat through construction of this parking area would be avoided, and subsequent hiker impacts would likely be negligible due to the large extent of area which could be traversed and the unattractive nature of the special status plant habitat.

Land Tenure

- Acquisition of the 40-acre private inholding would extend BLM protection measures to one site supporting Ertter's groundsel. Reduced recreational use of this area would result if water developments were removed, reducing potential impacts to the Ertter's groundsel site.

Minerals

- Withdrawal of 4,900 acres of the ACEC from locatable mineral activities would protect most of the special status plant sites from potential disturbances.

Livestock Grazing

- Removal of livestock grazing from the Leslie Gulch pasture would eliminate all threats to rare plants associated with livestock grazing. These threats include destruction of habitat through trailing, destruction of plants by trampling and ingestion, and by transport of weed seeds. The lower seral vegetative conditions of the bottom areas near the Owyhee Reservoir may again support perennial native grasses, thus eliminating open niches where weeds may colonize.

Noxious Weeds

- Manual weed control alone would eliminate the chances that rare plants or any other non-target plant species would be inadvertently sprayed. Because this control method is less effective than others, there would be an increased chance that existing weed infestations would expand.

Wild Horses

- Removal of wild horses from the ACEC through revision of the Horse Management **Plan and** Management Framework Plan would reduce the potential for impacts to rare plants, such as trampling of habitat and weed dispersal. Within the last five years, no wild horses have been observed in the ACEC, and consequently no impacts of wild horses to rare plants have been observed. The potential for wild horse use in the area currently exists because the boundary of the ACEC is not fenced and the area is administratively open to wild horse use.

Special Status Plants

- Addition of the gate in lower Dago Gulch would benefit special status plants by reducing the chances of vehicle traffic over the plant sites adjacent to the Dago Gulch Road.

Wildlife

- Since bighorn sheep were part of the coexisting flora and fauna of the area prior to stabilized human settlements, maintenance of a viable herd of bighorn sheep is considered compatible with special status plant management. No studies documenting use of bighorns on Owyhee clover have been conducted, and the interrelationship between the two species is not known, but it is likely that bighorns do eat the clover. There are no documented impacts by the bighorn or other wildlife on the special status plant species in the ACEC.

Recreation

- Increased recreational use in the ACEC would increase the potential for impacting special status plants and plant habitat. Direct impacts include disturbance to individual plants and their habitat. indirect effects would include dissemination of exotic weed seeds at campsites and on hiking trails. Alternative A would have less recreational impact than Alternative C, but more than Alternative B.

- Removal of the Back Country Byway and Watchable Wildlife designations would reduce the potential for recreational impacts to special status plants by possibly reducing the rate of increased recreational use in the ACEC.

- Development of site-specific trail segments which would route hikers around rare plant sites would reduce impacts to these sites.

- Eliminating recreational horse use would reduce dissemination of weed seeds through hay and animal transport. Seed dissemination would remain a concern during administrative use of horses in the ACEC.

- Instituting a back country permit system would allow controls to be placed on the amount of recreational use. Such a permit system would lessen potential recreational impacts on special status plants and their habitat.

- Limiting Special Recreational Use Permits to a maximum party size of six persons would aide in the avoidance of special status plant habitat.

Alternative B

Access and Roads

- Road maintenance at current levels affects special status plant sites which are already in a disturbed state due to past road construction. If kept at current levels, disturbance will occur to the borrow ditches along which Ertter's groundsel is sporadically found. Opportunities to minimize borrow ditch maintenance at two locations where Ertter's groundsel is found may help prevent loss of plants at those sites and may result in greater establishment of plants on those sites.

- Keeping Steamboat Ridge road open would have no effect on special status plants.

Land Tenure

- If the 40-acre private inholding were not acquired, BLM protection to one site supporting Enter's groundsel would not be obtained.

Minerals

- Withdrawal of the ACEC from locatable minerals and closure to leasable mineral activities would protect special status plants and their habitats from these potential disturbances. Salable minerals would remain available, but would be developed only after environmental analysis showed that impacts to other values could be mitigated.

Livestock Grazing

- Continuation of grazing as currently practiced would result in the current threats to the special status plants remaining. These threats include destruction of habitat through trailing, destruction of plants by trampling and ingestion, and transport of weed seeds. Local extinctions may occur at certain sites due to habitat destruction.

- The lower seral vegetative conditions of the bottom areas near the reservoir should improve over time due to the low utilization levels of key perennial forage species. The rate of improvement may be slightly slower than under Alternatives A and C.

Noxious Weeds

- Careful use of both mechanical and chemical control methods for noxious weeds would be most effective in controlling the threat of habitat loss due to spread of noxious weeds. There is some risk of inadvertent spraying of special status plants under this alternative.

Wild Horses

- Impacts of wild horses to special status plants, including habitat destruction and transport of weed seeds, may occur with the area remaining open to wild horse use.

Special status plants

- With no gate installation in lower Dago Gulch, there would continue to be threats by vehicles to the special status plant sites along the road there.

Wildlife

- Bighorn sheep were part of the coexisting flora and fauna of the area prior to stabilized human settlements, and maintenance of a viable flock of bighorn sheep is compatible with special status plant management. No studies documenting use of bighorns on Cwyhee clover have been conducted, and the interrelationship between the two species is unknown, but it is likely that bighorns do eat the clover. There are no documented impacts by the bighorn or other wildlife on othe special status plant species in the ACEC.

Recreation

- With the current level of recreational development and restrictions, damage at Dago Gulch and Slocum Creek site would continue. The level of recreational development proposed under Alternative B would make the ACEC the least attractive of the three alternatives and result in the least recreational impact to special status plants. With no control over horse use, noxious weed seeds can be brought into the area in hay or through the horses themselves.

Alternative C

Access and Roads

- Road maintenance affects special status plant sites near the road which are already in a disturbed state due to past road construction. Opportunities to minimize borrow ditch maintenance at two locations where Ertter's groundsel is found may help prevent loss of plants at those sites and more plants may become established.

- The four parking areas proposed for construction are not located in special status plant habitat. These pullout areas could benefit special status plant habitat elsewhere by dispersing recreational use in the ACEC. The proposed new parking area closest to the reservoir could direct dispersed hiking into some areas of known plant habitat. Damage to special status plants and habitat which would result through construction of this turnout and subsequent hiker dispersal would likely be negligible.

- No effect on special status plants would occur if Steamboat Ridge road remains open.

Land Tenure

- If the 40-acre private inholding were not acquired, BLM protection to one site supporting Ertter's groundsel would be foregone.

Minerals

- Mineral development activities could destroy and displace special status plants. Seed banks contained within soils could be destroyed, genetic diversity reduced, and habitat permanently lost. The extent and location of activities would determine the severity of impacts to the special status plants. Normal reclamation practices would likely not be capable of reproducing the conditions necessary for plant survival on the unique substrates upon which the plants grow if the plant sites are disturbed.

Livestock Grazing

- Changing the season of grazing from the current use to winter use would not eliminate mechanical damage to grimy ivesia plants since this species does not go dormant in winter as do Owyhee clover and sterile milk-vetch. Because of the succulent nature of this species, a possibility exists that the plants would be grazed during this time.

- The two annual species, Ertter's groundsel and Packard's mentzelia, would have fully completed their life cycle in the winter, so that no mechanical damage to these species would occur with winter grazing.

- With the increased potential for frozen ground in the winter, there is reduced chance for soil compaction and disturbance on many special status plant sites. The exception would be south slopes at lower elevations which receive solar radiation and may warm sufficiently to prevent freezing of the soil.

- The lower elevation, south-facing slopes near the reservoir provide open and thermally desirable areas for livestock to congregate. These areas are also near water. Shadscale, which often grows on the ash talus which also supports the rare plant species, is extensively used by livestock during the winter months. These features would attract livestock to the high concentration of rare plant sites in lower Leslie Gulch and could result in increased mechanical damage to the plants and plant habitats.

- Changing the season of grazing to winter should lead to improved vegetative conditions of the bottoms near the reservoir. These areas would then be less susceptible to weed invasion, but the conditions may not improve as rapidly as they would under alternative A.

Noxious Weeds

- Careful use of both mechanical and chemical control methods for noxious weeds would be most effective in controlling the threat of habitat loss due to spread of noxious weeds. There is some risk of inadvertent spraying of rare plants under this alternative.

Wild Horses

- Impacts of wild horses to rare plants, including habitat destruction and transport of weed seeds, may occur with the area remaining open to wild horse use.

Wildlife

- Bighorn sheep were part of the coexisting flora and fauna of the area prior to stabilized human settlements, and maintenance of a viable herd of bighorn sheep is compatible with rare plant management. No studies documenting use of sheep on Owyhee clover have been conducted,

and the interrelationship between the two species is unknown, but it is likely that bighorns do eat the clover. There are no documented impacts by the bighorn or other wildlife on othe special status plant species in the ACEC.

Recreation

- The issuance of special recreation use permits for competitive events would allow use to be directed only to specified areas and would include special conditions to be placed on the permits to avoid special status plant sites. Limitation of parties to six persons also would aid in limiting potential impacts to plant sites,

- Expansion of the campground at Slocum Creek would put the campground within 50 feet of a talus slope which supports Ertter's groundsel. This expansion would increase the possibility that campers would impact the site. This impact could be partially mitigated by construction of a fence and through public education.

- Providing potable water at the Slocum Creek campground would further attract visitors to the area, thus increasing chances of impacts to the special status plant sites.

- Requiring that weed free hay be used for recreational horse use within the ACEC would reduce the potential of weed dispersal. This measure does not totally eliminate the problem with weed dispersal via horses since horses can carry weed seeds in hooves or digestive tracts.

- Development of an equestrian campsite and installation of a vault toilet at Dago Gulch is not anticipated to have an effect on special status plants in Dago Gulch. Camping with horses may result in weeds being introduced.

- Expanding facilities at the boat launch area would not directly affect special status plants or their habitat; however, impacts to plants can result due to increased visitor use of the ACEC resulting from improved facilities.

- Neither of the two proposed picnic areas is anticipated to have an effect on special status plants or their habitats.

- Maintaining the special designations of Scenic Byway and Watchable Wildlife, combined with the level of recreational development proposed under Alternative C would invite more visitor use to the ACEC that the other alternatives, increasing the likelihood that special status plant sites would be affected by recreational activities.

Monitoring Needs

The five candidate plant species known to occur in Leslie Gulch would be monitored for maintenance of habitat and existence of viable populations. Two of the species are annuals, notoriously difficult to monitor for population viability due to fluctuations in numbers due to climatic conditions and unknown seed bank dynamics. Disturbances to their habitat and invasion by exotic species should be monitored several times annually. Plant demographics of the perennial species would yield information about the natural population dynamics of these three species. After a final decision has been reached regarding management of the ACEC, a monitoring plan for the special status plant species will be written, taking into account impacts from recreational use, wild horses, mining activity, grazing, and noxious weed encroachment.

Wildlife

Factors Which Influence Management Prescriptions

Bureau policy states that candidate species such as California bighorn sheep will be treated as priority species in all land use plans. Management direction provided by the MFP was to manage special status wildlife species habitats in a manner that would favor their perpetuation and/or expansion, to provide forage for big game, and to assure that land use authorizations perpetuate or enhance existing habitat characteristics of critical wildlife use areas. The Northern Malheur MFP also recommended bighorn reintroduction and the Southern Malheur EIS Preferred Alternative had provisions for sheep transplants.

The Leslie Gulch Habitat Management Plan (HMP) for California bighorn sheep includes the Leslie Gulch ACEC area. One bighorn sheep water development and fence modification for bighorn passage has been completed in the ACEC as a result of the HMP. Future maintenance may be necessary on those projects. Reclamation of Steamboat Ridge Trail was a planned HMP action that has not been implemented.

Like other reintroduced herds of California bighorn sheep, this population seems to be self-limiting in

numbers. One of the factors that may limit the herd is the bighorn sheep lungworm, an endemic organism that is passed from the ewe to the unborn lamb and causes mortality in young animals. In the past, ODFW has placed wormer blocks for bighorn sheep use in the ACEC. Because there are abundant naturally occurring salts in the area, the blocks were not used by the bighorns and have been removed. A different type of wormer may be used in the future.

Management actions that could influence the quality of bighorn sheep habitat in Leslie Gulch include the number of roads, range condition, amount of human disturbance, presence or absence of domestic sheep, mineral development, and the availability of water.

Because most of the historic California bighorn range has been impacted by human use, it is unlikely that enough herds can be established to remove the species from consideration for listing under the Endangered Species Act. If a catastrophic event occurs, such as epidemic disease, the likelihood of species survival increases with the number of populations. In addition, the Leslie Gulch herd is one of only a few in Oregon that are large enough to serve as a source for animals to transplant to other areas. Therefore, the Leslie Gulch ACEC is regionally and nationally significant for California bighorn sheep habitat. Protection of those values is necessary to maintain a healthy herd and thereby contribute to protection of the species.

Bighorn sheep are captured periodically by the Oregon Department of Fish and Wildlife (ODFW) for relocation to unoccupied ranges. This removal of animals also counteracts the stagnation of the Leslie Gulch herd. Expansion to new habitat without manual relocation has been rare. In 1988, the Malheur County Bighorn Sheep Reintroduction Plan and Memorandum of Understanding (MOU) was signed by BLM Vale District and ODFW. Reasonable numbers for the Leslie Gulch bighorn herd unit were established at 250 to 300 animals. Capture and release of bighorn sheep were authorized in the Plan and MOU.

Capture entails the use of a helicopter, trailers and other base camp equipment for two days, usually in the winter. Only two captures, in 1986 and 1988, have been conducted in Leslie Gulch ACEC up to the present time. Past activity was based at Slocum Creek campground, with actual capture activity outside the ACEC boundary. Helicopters are also used by ODFW for bighorn inventories in January and June, with landings for refueling usually occurring at the Overlook.

Bald eagles, listed as threatened under the Endangered Species Act, winter along the Owyhee River, but there are no known roost sites such as large cottonwoods within the ACEC. No site specific information is presently available.

Townsend's big-eared bat populations are declining seriously in Oregon and elsewhere, Less than 2800 individuals are estimated to remain in Oregon. The most important habitat factor seems to be undisturbed roost, nursery, and winter hibernating sites, which are often found in caves. When those sites are disturbed, critical fat reserves are burned by the bats. There is no site specific information on this species.

Mojave black-collared lizards are associated with boulders or rockpiles on arid slopes. This species is considered sensitive because of its restricted distribution. Under Bureau policy, a species designated as Bureau Sensitive will be treated the same as federal candidate species. The western ground snake, a BLM tracking species, is difficult to inventory because of its secretive, nocturnal habits. The few specimens found in Oregon have been located at the foot of rocky slopes.

Impacts Of Alternatives On Wildlife

Alternative A

Access and Roads

- Road closure on Steamboat Ridge would benefit bighorn sheep, mule deer, and Rocky Mountain elk, since there would be less disturbance through human activity.

Land Tenure

- Acquisition or a scenic easement of the private inholding would prevent further development, habitat degradation, and disturbances to wildlife at

- Rehabilitation of the site and accompanying disturbance would have a short-term negative impact on bighorn sheep and other wildlife. Removal of the present development would have a long term beneficial effect by returning the site to native habitat and reducing the likelihood of camping near Mud Springs. Removal of potable water available to the public should result in decreased use of the site. This would result in fewer visitor contacts with bighorn sheep at the spring.

Minerals

- Wildlife habitat would be maintained within the area withdrawn from mineral activity. If the rest of the ACEC is not withdrawn through wilderness designation, adverse impacts could occur if mineral development is proposed. Impacts include habitat degradation and disturbance to wildlife. The severity of those impacts would be dependent upon the level and location of mineral activity.

Livestock Grazing

- Utilization levels by livestock are presently very light, with nearly all of the cattle use on slopes under 40%. Removal of livestock may improve forage quality on the lower slopes. Forage is not a limiting factor for this bighorn sheep population, so benefits may be minimal. Other wildlife species dependent on mid to late seral stage vegetation for forage and cover should benefit. There could be negative impacts to wildlife dependent on early seral stage vegetation. Removal of cattle would reduce the potential for noxious weed invasion and expansion of existing sites. Minimizing invasion by exotics would maximize native habitat available for wildlife forage and cover.

Noxious Weeds

- Manual control would limit invasion of exotics along the roads, which would make available otherwise occupied native habitat used for forage and cover. With no chemical control, there would be no toxic effects on small mammals, reptiles, or other wildlife.

- Cleaning of road maintenance equipment for removal of weed seeds would benefit wildlife by maintaining available native habitat.

Wild Horses

- No impacts on wildlife are known due to recent wild horse use. Removal of the ACEC from the HMA would eliminate the potential for any future impacts.

Special Status Plants

- The gate at Dago Gulch would limit vehicle access and potential disturbance of wildlife from vehicle use.

Wildlife

- Limits on areas for base operations would not prevent ODFW from carrying out needed bighorn management. Occasional removal of animals for transplant would maintain the health of the bighorn sheep herd. Wormer blocks or other supplements would also be available for use if deemed necessary by ODFW. There should be no effects on other wildlife species from bighorn management activities.

Wildfire

- Protection from fire would benefit special status species and other wildlife by minimizing loss of habitat. Surface disturbance from earthmoving equipment could create site-specific negative impacts to Mojave black-collared lizards, western ground snakes and other wildlife species with restricted ranges.

Recreation

- Fewer visitors would be expected under this alternative. Lessened recreation development and curtailment of present uses should be beneficial to wildlife. There would be fewer wildlife-human contacts and less ground disturbance under this alternative. Elimination of horses would reduce the potential for invasion by new exotic species and expansion of current exotic species populations into native wildlife habitat.

- Developed recreation would be limited to Slocum Creek campground and the boat ramp area, which are already disturbed. Camping sites would be eliminated at Dago, which would further reduce visitor contacts with bighorns and other wildlife at Mud Springs. To a lesser extent, impacts may occur from day use parking and restrooms.

- Removal of rock climbing routes with fixed anchors and hand holds should reduce use and the potential disturbances to raptors and bat roosting habitat.

Alternative B

Access and Roads

- Leaving Steamboat Ridge road open would result in continued disturbance of bighorn sheep, mule deer, and Rocky Mountain elk at current levels.

Land Tenure

- If the private inholding were not acquired, there would likely be increased visitor use of the Mud Springs area. This use would result in more disturbance to bighorn sheep and other wildlife using the spring. Despite zoning laws, the potential would remain for further development, habitat degradation and disturbance to wildlife at Mud Springs.

Minerals

- Withdrawal from locatable and leasable minerals activity would benefit bighorn sheep and other wildlife species by reducing the potential of disturbance to habitat.

Livestock Grazing

- With existing livestock management, accessible slopes would likely remain in early seral vegetation for a longer time. Wildlife forage quality would recover more slowly than with the other alternatives. This would have negatively impact wildlife species dependent on middle to late seral stage vegetation for forage and cover. There would be no impact on the bighorn sheep population, since forge is not a limiting factor in the ACEC. The potential for increased weed invasion would continue longer, which could reduce the amount of available forage and cover for wildlife.

Noxious Weeds

- The site specific, limited use of herbicides could cause short-term moderate toxic effects in small mammals and reptiles. The sprayed areas are so restricted that negative impacts should be minimal. The positive impact of improving habitat by removing undesirable vegetation is far greater than any potential negative impacts.

Wild Horses

- Should wild horses move into the ACEC, there would be increased grazing pressure, especially on the lower slopes. There is more use of late seral stage vegetation by horses than cattle, so there would be more dietary overlap and competition with bighorn sheep. However, forage is not a limiting factor for this bighorn population, so impacts would be minimal. Ecological site conditions on the lower slopes would remain in early seral stages, and those areas in mid to late seral stages could decline under increased grazing pressure. Wildlife forage quality and quantity would be negatively impacted.

Special Status Plant Species

- Continuation of present sensitive plant species management would have no effect on wildlife.

Wildlife

- Occasional removal of animals for transplant would maintain the health of the bighorn sheep herd. Wormer blocks or other supplements would also be available for use if deemed necessary by ODFW. There should be no effects on other wildlife species from bighorn management activities.

- There would continue to be a potential for disturbance to nesting raptors and Townsend's big-eared bat habitat.

Wildfire

- Protection from fire would benefit special status species and other wildlife by minimizing loss of habitat. Surface disturbance from earthmoving equipment could create site-specific negative impacts to Mojave black-collared lizards, western ground snakes and other wildlife species with restricted ranges.

Recreation

- Current lack of control on visitor use could result in major impacts to wildlife species as the number of visitors increases. Potential impacts include increased surface disturbance, increased harassment and visitor contacts, and new and further invasion of weedy species by spreading seeds and soil disturbances into native habitat.

- Some disturbance of rubble and boulders near the bottom of the slopes could occur from rock climbing activities at Einstein. Impacts on Mojave black-collared lizard and western ground snake habitat would be minimal and localized.

Alternative C

Access and Roads

- Leaving Steamboat Ridge road open would result in continued disturbance of bighorn sheep, mule deer and Rocky Mountain elk at current or higher levels.

Land Tenure

- Acquisition or a scenic easement of the private inholding would prevent further development, habitat degradation, and disturbances to wildlife at Mud Springs.

- Piping the water from Mud Spring for human use off-site would have a short-term negative impact from construction noise and disturbance. In the long term, bighorn sheep and other wildlife should benefit from the reduction in disturbance and encounters with people at Mud Springs. By providing potable water at Slocum Creek, more visitors would be attracted to the ACEC with the associated increase of impacts to all wildlife.

Minerals

- Not withdrawing the ACEC from locatable mineral activity, mineral leases or sales would have a negative impact on both wildlife habitat and wildlife species. Surface disturbance would result in loss of habitat. Mineral activities and related development are likely to disturb wildlife and cause them to avoid the area of disturbance.

Livestock Grazing

- Changes in grazing practices to winter use would result in improved forage quality for wildlife. Winter grazing removes only dormant grass material and does not deplete the carbohydrate reserves of the plants. The grasses can achieve their maximum potential for increase in size, vigor and productivity. Wildlife species dependent on mid to late seral stage vegetation for forage and cover should benefit. There could be a negative impact to wildlife dependent on early seral stage vegetation, Forage is not a limiting factor for this bighorn sheep population, so benefits to bighorns would be minimal.

Noxious Weeds

- The site specific, limited use of herbicides could cause short-term moderate toxic effects in small mammals and reptiles. The sprayed areas are so restricted that negative impacts should be minimal. The positive impact of improving habitat by removing undesirable vegetation is far greater than any potential negative impacts.

- Weed-free hay would limit the spread of exotics into native wildlife habitat. However, enforcement would be difficult and some spread of weeds is likely from horse use, since weed seeds can be carried in digestive tracts for several days.

Wild Horses

- If wild horses move into the ACEC, there would be increased grazing pressure, especially on the lower slopes. There is more use of late seral stage vegetation by horses than by cattle, so there would be more dietary overlap and competition with bighorn sheep. However, forage is not a limiting factor for this bighorn population, so impacts would be minimal. Ecological site conditions on the lower slopes would remain in early seral stages, and those areas in mid to late seral stages could decline under increased grazing pressure. Wildlife forage quality and quantity would be negatively impacted.

Special Status Plant Species

- Exclosure fences would meet BLM guidelines for wildlife passage. There would be no negative impacts on wildlife.

- The gate in lower Dago Gulch would reduce impacts to wildlife from vehicles using the lower 0.75 mile of the road.

Wildlife

- Occasional removal of animals for transplant would maintain the heatth of the bighorn sheep herd. Wormer blocks or other supplements would also be available for use if deemed necessary by ODFW. There should be no effects on other wildlife species from bighorn management activities.

Wildfire

- Protection from fire would benefit special status species and other wildlife by minimizing loss of habitat. Surface disturbance from earthmoving equipment could create site-specific negative impacts to Mojave black-collared lizards, western ground snakes and other wildlife species with restricted ranges.

Recreation

- This alternative would make the ACEC more attractive to visitors for both day use and overnight camping. Disturbances and harassment of wildlife would be more likely to occur. Increased development would also result in site-specific removal Of

habitat for species such as nongame migratory birds and herptofauna such as the Mojave black-collared lizard.

- Some disturbance of rubble and boulders near the bottom of the slopes could occur from rock climbing activities at all of the existing sites. Impacts on Mojave black-collared lizard and western ground snake habitat would be minimal and localized. Any disturbance to raptors and bat roosting sites near the existing climbing routes would continue.

Monitoring Needs

Annual aerial monitoring of California bighorn sheep populations will continue. Baseline information for bald eagle winter use, presence and distibution of special status wildlife species, and raptor nesting in the ACEC will be gathered.

Wildfire

Factors Which Influence Management Prescriptions

The Vale District Fire Management Activity Plan establishes guidelines for selecting fire suppression methods for individual fires within the District. These guidelines consider resource conflicts of the various methods available and the severity of burning conditions. Fire suppression personnel must consider the trade offs between impacts to other resources of the area and the effectiveness of selected fire control measures. Full fire suppression efforts which include crawler tractor constructed fire lines may not be appropriate where impacts to the visual resource are of primary concern such as in Leslie Gulch. The Interim Policy and Guidance for Lands Under Wilderness Review specifies that fire control methods be selected which are most effective while being least damaging to wilderness values. These constraints apply only to the Wilderness Study Area portions of the ACEC. No earth moving equipment may be utilized in any identified Special status Plant site or archaeological sites.

Fire suppression on public lands often is required to prevent fire from spreading to adjacent lands. The private owner of the lands to the south of Leslie Gulch uses these lands for grazing of livestock. Fire which spreads from the public lands can destroy privately owned forage and range developments. The Federal Government could be held liable for damages caused by fire spreading ***from the*** public lands if less than full suppression measures are implemented.

The Interim Policy and Guidance for Lands Under Wilderness Review also sets policy for revegetation activities within Wilderness Study Areas. This policy states that to the extent feasible, emergency seeding and planting will utilize species which are native to the area and that the use of mechanized cross country travel will be avoided.

Impacts Of Alternatives On Wildfire

Alternative A

Access and Roads

- Closure of the Steamboat Ridge road would eliminate this route for access to this area by fire suppression personnel.

Livestock Grazing

- With no cattle to consume annual grass production, there would be a slight increase in fine fuels available during the fire season. Since large portions of the ACEC are either not used by livestock or are inaccessible and many natural fire breaks exist within the ACEC, there is not expected to be a significant change to the fire hazard within the ACEC due to changes in livestock grazing.

Recreation

- Restricting campfires to developed campgrounds and not allowing back country camping would remove these potential sources of fire from the ACEC and reduce fire hazard.

Alternative B

Access and Roads

- All existing roads would remain available for access by fire suppression personnel.

Livestock Grazing

- The existing grazing in March and April reduces the accumulation of fine fuel in areas where cattle graze. Since grazing occurs early in the growing season, grass growth which occurs following removal of the livestock remains available for fire

fuel during the late summer fire season, Since large portions of the ACEC are either not used by livestock or are inaccessible and many natural fire breaks exist within the ACEC, there is not expected to be a significant change to the fire hazard within the ACEC due to changes in livestock grazing.

Recreation

- Permitting unrestricted camping and use of campfires throughout the ACEC would increase the risk of a wildfire starting by one of the activities.

Alternative C

Access and Roads

- All existing roads would remain available for access by fire suppression personnel.

Livestock Grazing

- Changing the season of livestock grazing to the winter months would reduce the affect that the cattle have in reducing accumulation of fine fuels. Grazing would not occur during the growing season, so there would be more fine fuels available to burn during the late summer fire season. Since large portions of the ACEC are either not used by livestock or are inaccessible and many natural fire breaks exist within the ACEC, there is not expected to be a significant change to the fire hazard within the ACEC due to changes in livestock grazing.

Recreation

- Although camping would be allowed within most of the ACEC, no ground fires would be allowed outside of developed campgrounds. This alternative would have the same risk of fire starts by recreationists as Alternative A and less risk than Atternative B.

Monitoring Needs

The impacts of fire and fire suppression activities require monitoring until all disturbances are stabilized by vegetation. In Leslie Gulch, impacts to the **Relevant** and Important Values are primarily considered; however, impacts to all resources of the area are also analyzed. Fire personnel are used as available to monitor rehabilitation of burned areas and identify locations where remedial work is necessary.

Recreation

Factors Which Influence Management Prescriptions

The diverse nature of the recreational opportunities available in Leslie Gulch has a significant role in the management of the area. While remaining relatively unknown, the area's popularity is increasing. In recent years, the area has received attention in various regional and national publications. BLM's wilderness review process has also attracted public interest to the area.

The quality of a visitor's recreation experience in a particular activity is affected by a combination of environmental and personal factors. Environmental factors can include the level and type of development, condition of the area's resources, user conflicts and extent of managerial presence (signs, patrols). Each visitor also has a unique set of personal values (preferences, expectations, tolerances) which also affects his or her experience when recreating in the area.
Existing management direction for recreation in the area is provided in the ***Northern Malheur Management Framework Plan*** (MFP) and in the *Interim* ***Management Policy and Guidelines for Lands under Wilderness*** Review (IMP).

The MFP provides for legal motorized access with an off-highway vehicle (OHV) limited use designation which restricts vehicle use to the existing Runaway Gulch/Leslie Gulch, Dago and Steamboat Ridge roads. Development of trail heads, trails, the boat ramp, sanitation facilities, campground(s)/picnic areas, VRM Class II management, managerial signing and dispersed recreational use are also provided for in the MFP. Under BLM's Recreation 2000 initiative, the Leslie Gulch area is a part of the Owyhee River Complex Special Recreation Management Area.

The purpose of the IMP is to retain or enhance existing wilderness values which qualify the WSAs suitable for preservation as wilderness. These values include naturalness, outstanding opportunities for solitude and primitive and unconfined recreation, and several special wilderness features.

Management actions should not exceed the management objective for the VRM Class II designation. Any developments proposed for the ACEC must consider their potential affects upon the visual character of the area.

Through an MOU with the BR, the BLM manages the BR parcel which is located between the ACEC and the Owyhee Reservoir. The type and extent of developed recreational facilities on this parcel concur with the MFP decision to provide boating access in Leslie Gulch. These facilities were developed in partnership with Malheur County and the Oregon Department of Parks and Recreation and provide recreation uses not otherwise available in the Leslie Gulch area. The facilities' presence and use affects recreation opportunities within the ACEC.

Leslie Gulch is a component of BLM's National Watchable Wildlife and National Back Country Byways programs. Both programs are specifically described in widely circulated promotional mediums. The State of Oregon has nominated the Byway as one of its original Scenic Tour Loops, a new program designed to promote motorized traveler's enjoyment of the state's natural and cultural resources and to enhance tourism in the state.

Sport rock climbing has recently expanded within the ACEC. Specific management guidance regarding this activity has yet to be developed in the BLM. In the Vale District, there is currently a moratorium on the placement of fixed anchors and the use of portable power tools in WSAs until additional management direction is developed. The effects of rock climbing include the activity's impacts on the area's scenic resources, cultural values, wilderness values, soils and vegetation, and other recreational users within the area.

Impacts Of Alternatives On Recreation

Alternative A

Access and Roads

- Two additional parking areas along the Leslie Gulch Road would decrease driving hazards by keeping parked vehicles off of the traveled road. Access would be improved to areas of the ACEC where there is currently no parking. This would reduce impacts to resources at the currently heavier used areas and increase use in other areas. Overall, visitors' primitive recreation experiences would be enhanced by decreasing the number of party contacts with the improved distribution of use.

- Elimination of vehicular access on Steamboat Ridge would preclude use by recreationists who drive this particular route. Vehicle trespass in the three WSAs would be reduced.

- By not improving the Leslie Gulch channel crossings, current road standards would continue to discourage some visitation, particularly by low clearance vehicles. Occasional flood damage of the crossings would continue to occur, temporarily preventing road access and possibly stranding visitors.

Land Tenure

- Acquisition of the 40-acre private parcel at Dago Gulch would provide for the establishment of day use parking area and a restroom in that area. These would reduce vehicle congestion and place a restroom closer to where back country recreational use originates in this part of the ACEC. Reclamation of the existing developments on this parcel and careful design of the new facilities would reduce the overall visual impacts on the setting.

- The elimination of developed water at Mud Springs would reduce the attractiveness of the ACEC for camping.

Minerals

- The closure of leasable minerals and mineral sales throughout the ACEC would protect the existing natural landscape, scenic qualities and recreational opportunities of the ACEC from disturbances associated with development of these mineral resources.

- Exploration or development of locatable minerals, where available in the ACEC, could adversely impact the scenic qualities of the ACEC. These activities would likely not meet visual management objectives for the VRM Class II area of the ACEC. The quality of recreation experience could be adversely impacted by mineral development activities.

Livestock Grazing

- The removal of livestock from the Leslie Gulch pasture would enhance the quality of the recreation experience for visitors who dislike the presence of livestock or their evidence and would reduce the human-induced alteration as a result of livestock use activities on the natural setting within the ACEC.

Noxious Weeds

- Manual removal of noxious weeds would aid in keeping the area's natural appearance, but would not be as effective at controlling weeds as Alternatives B and C.

Wild Horses

- Although there has been no recent wild horse use, excluding the Leslie Gulch area from the Wild Horse Management Area would eliminate the chances that visitors would observe wild horses. The presence of wild horses can have positive or negative impacts on a recreational experience depending upon personal perceptions.

Special Status Plants

- Any fences or trail segments constructed to protect special status plant sites would create a visual intrusion but would not significantly affect most recreational activities.

- installation of a gate on the Dago Gulch road would limit vehicle access on approximately 0.75 mile of dead end road and reduce motorized vehicle trespass in the Upper Leslie Gulch WSA.

Recreation

- Elimination of the Back Country Byway and Watchable Wildlife designations would result in less public awareness of the values present in the ACEC. The opportunity for public education available through these programs would be lost. Although recreational use of the Leslie Gulch area is expected to increase in the future, the amount of increase would likely be less under this alternative.

- This alternative would be the least attractive for vehicle campers at Slocum Creek campground since there would be no additional development.

- There would be no opportunities for vehicle camping outside of the Slocum Creek Campground.

- The Owyhee Breaks trail would not be available to direct users to a preferred route location. Proliferation of trail routes and impacts to resources may occur.

- Opportunities for recreational horse use in the area would not be available.

- Impacts on natural values and higher levels of social contact between users due to back country Camping would not occur. This would retain the back country in a more natural condition and enhance the quality of a primitive recreation experience for day users in the area.

- Permits which limit organized group size to six persons would result in less impact to natural values.

- Sport rock climbing would not be available within the ACEC. Evidence of the rock climbing activities such as fixed anchors, chalked and artificially constructed handholds, site-specific soil compaction, and vegetation impacts would not occur. Some visual scarring of the rock faces may remain evident due to removal of existing anchors, particularly at the Einstein site.

Alternative B

Access and Roads

- No additional parking areas along the Leslie Gulch Road would preclude the opportunity to improve safety along the road and to improve the distribution of dispersed recreation activities within the ACEC. This could lead to a lower quality primitive recreation experience for visitors as use levels increase in more popular back country areas.

- Vehicle access to Steamboat Ridge would remain. The potential for unauthorized vehicle use in the Honeycombs WSA would continue.

- By not improving the Leslie Gulch channel crossings, current road standards would continue to discourage some visitation, particularly by low clearance vehicles. Occasional severe flood damage of the crossings would continue to occur, temporarily preventing road access and possibly stranding visitors.

Land Tenure

- With no acquisition of the private parcel or scenic easement at Dago Gulch, the possibility of development of day use facilities and reduction of visual impacts by the existing structures would be foregone. Any additional deveopments by the landowner would likely further impact the high scenic values located in the setting of the ACEC.

- Public use of water from Mud Spring would continue to be at the discretion of the private land owner.

Minerals

- The ACEC would remain available for salable minerals extraction. These activities are descretionary actions and any proposed developments would require environmental analysis prior to development which would analyze the impacts of any proposal on the identified values within Leslie Gulch.

- The closure to mineral leasing and withdrawal of locatable minerals throughout the ACEC would protect the existing natural landscape and high scenic qualities of the ACEC from disturbances associated with exploration and extraction of these mineral resources. The enjoyment of recreational activities would be protected from impacts of leasable and locatable minerals mining activities.

Livestock Grazing

- The presence of livestock during the beginning of the spring high recreational use period (March and April) would impact some recreational activities. The presence of livestock or evidence of livestock may intrude upon the natural setting for some recreationists and lower their desired recreation experience while in the area.

Noxious Weeds

- The combination of manual and chemical control of noxious weeds would likely result in fewer weeds in the area than under Alternative A, aiding in maintaining the area's natural appearance.

Wild Horses

- There is potential for wild horses to move into the ACEC and their use would be allowed to continue under this alternative. The presence of wild horses can have positive or negative impacts on a recreation experience depending upon personal perceptions.

Special Status Plants

- Under current guidance, site-specific measures may be implemented to protect special status plant species from human induced impacts. Possible measures including public education and fence construction to protect plant sites may enhance visitors' awareness, respect and interest about the area's unique plants and their habitat.

- Any fences or trail segments constructed to protect special status plant sites would create a visual intrusion but would not significantly affect ***most*** recreational activities.

- Vehicle access to the lower 0.75 mile of Dago Gulch would remain. The potential for vehicle use in the Upper Leslie Gulch WSA would continue.

Recreation

- Maintaining the Back Country Byway and Watchable Wildlife management programs in the ACEC would likely increase the area's recreational use more so than if these programs were not continued. These programs also serve the important role of public education and information dissemination about resource values and user ethics.

- The development of individual camp units within the presently disturbed area at the Slocum Creek campground would make vehicle camping more attractive than under Alternative A. This level of campground development would not help meet peak season camping demands for the area.

- Continued vehicle camping at existing dispersed vehicle camp locations in the ACEC (primarily in Dago Gulch) would continue to cause damage to vegetation, soils and aesthetic values.

- Recreational horse riding would remain available to all accessible areas of the ACEC. Impacts due to horse use would continue on primitive trails shared by hikers and likely result in the establishment of some additional trails and spreading of weed seeds in the area.

- The Owyhee Breaks trail would not be available to direct users to a preferred route location. Proliferation of trail routes and impacts to resources may occur.

- With the continuation of uncontrolled back country camping, the frequency of social contacts between back country users and long term evidence of campsites would be greater than under Alternative A. The sense of solitude and quality of a primitive recreation experience would be less than under Alternative A.

- With no defined maximum size of organized group activities, more intense and accelerated impacts caused by larger groups would continue on natural values. Social conflicts with other recreationists could be more apparent. Special stipulations added to issued use permits would partially mitigate the impacts.

- Impacts due to fixed anchor rock climbing activities would be limited to the Einstein climbing site. These include visual impacts of fixed hardware, artificially created hand holds, white chalk on the rock faces and impacts upon other resources by the concentration of activity at the climbing sites. The climbing routes would not be visible from the access road, therefore, disruption to the high quality scenery would not occur for motorists. The climb routes and activities would be visible to other back country recreationists in the Upper Leslie Gulch WSA.

Alternative C

Access and Roads

- The development of four parking areas along Leslie Gulch and Dago Gulch would further increase opportunities for improvement of safety and access to additional areas of the ACEC. This would reduce user pressure and impacts on those back country areas with existing parking.

- Vehicle access to Steamboat Ridge would remain as would the potential for vehicle trespass into the Honeycombs WSA.

- The proposed drainage crossing improvements under this alternative would slightly improve accessibility of the ACEC. These improvements would allow the crossings to pass larger storm runoff events without becoming impassable. This would reduce the chances that visitors would become stranded in the gulch during storms. Although all types of highway vehicles presently use the road, these improvements would make the ACEC more attractive to visitors, which could result in some increased use.

Land Tenure

- Acquisition of the 40-acre private parcel at Dago Gulch would provide for the establishment of a day use parking area and restroom in that area. These developments would reduce vehicle congestion and place a restroom closer to where back country recreational use originates in this part of the ACEC. Reclamation of the existing developments on this parcel and careful design of the **new** facilities would reduce the overall visual impacts **on** the setting.

- Piped potable water to Slocum Creek campground from Mud Springs would increase the attractiveness of the ACEC for developed camping. Combined with the campground's expansion, this development would increase the numbers of visitors as well as the length of stay of campers.

Minerals

- The closure to mineral leasing and material sales would protect the existing natural landscape and high scenic qualities-one of the important and relevant values of the ACEC—from exploration and extraction activities associated with these kinds of mineral resources.

- Exploration or development of locatable minerals in the ACEC could adversely impact the exceptional scenic qualities of the ACEC, which are an important and relevant value of the ACEC. Locatable mineral extraction activities would likely not meet visual management objectives for the designated VRM Class II area of the ACEC. The quality of a recreation experience for most recreation opportunities available in the ACEC would likely be substantially adversely impacted and diminished by certain mineral exploration methods and by all forms of mineral extraction activities.

Livestock Grazing

- Changing the livestock grazing season in the Leslie Gulch pasture to winter use would separate the cattle use period from the primary recreational use season. While some indirect evidence of livestock use would still be experienced by recreational visitors, it would likely not be as noticeable as under Alternative B.

Noxious Weeds

- The combination of manual and chemical control of noxious weeds would likely result in fewer weeds in the area than under Alternative A, thus aiding in maintaining the areas natural appearance.

Wild Horses

- There is potential for wild horses to move into the ACEC, and their use would be allowed to continue under this alternative. The presence of wild horses can have positive or negative impacts on a recreation experience depending upon personal perceptions.

Special Status Plants

- Any fences or trail segments constructed to protect special status plant sites would create a visual

intrusion but would not significantly affect most recreational activities. Should it be needed, a back country visitor access permit system would help limit impacts on special status plants.

- Installation of a gate on the Dago Gulch road would limit vehicle access on approximately 0.75 mile of dead end road up Dago Gulch. Vehicle trespass in the Upper Leslie Gulch WSA would be reduced.

Recreation

- Maintaining the Back Country Byway and Watchable Wildlife management programs in the ACEC would likely increase the area's recreational use more so than if these programs were not continued. These programs also serve the important role of public education and information dissemination about resource values and user ethics.

- Vehicle camping at Slocum Creek campground and for other developed recreation activities would be most attractive under this Alternative. This is due to the on-site availability of potable water, development of individual camp units and the improvements at the boat ramp area.

- Equestrians would have a vehicle campsite at Dago Gulch, keeping their overnight activities and livestock separate from Slocum Creek campground users.

- The requirement for horse users to provide weed free hay would be an inconvenience for recreational horse users.

- Impacts due to recreational horse use would be confined to roads and accessible ridge tops under this alternative, largely avoiding special status plant habitats.

- Motorized vehicle access would remain available for Steamboat Ridge where violations of off road driving have occurred within Honeycombs WSA.

- The frequency of back country user contacts would likely be greatest under this alternative. This would somewhat diminish the quality of the primitive recreation experience for the back country visitors.

- Providing for the Owyhee Breaks trail and creation of a trailhead would direct users to a preferred route to reduce impacts to sensitive resources.

- With no limit on the size of organized group activities, there would be more impacts on resource values. Social conflicts with other recreationists would be more apparent. Special stipulations added to issued special use permits would partially mitigate the impacts.

- Retention of all existing sport rock climbing routes would result in continuation of impacts due to rock climbing activities. These impacts include visual impacts of fixed hardware, artificially created hand holds and white chalk on the rock faces, and impacts upon other resources such as soil and vegetation caused by the concentration of climbing activity. Limiting the number of persons at a climbing site would reduce the impacts more than under Alternative B. Some climbing routes would be within view of the Leslie Gulch Road, disrupting sightseeing within the area for motorists.

Monitoring Needs

Maintain vehicle counts of use, particularly during the primary recreational use period (April through October). Conduct studies to determine where and to what extent various recreational activities are occurring with the ACEC, emphasizing water-oriented, developed facility and back country dispersed recreational activities.

Establish baseline data for indicators of condition (current and desired) and measures of human induced recreational impacts on natural and cultural values, focusing on areas where use is more concentrated and where more sensitive resources may be affected. Establish measures for retaining or enhancing quality of recreation experience, while minimizing conflicts between various recreation uses and users.

Wilderness

Factors Which Influence Management Prescriptions

The 1989 BLM Oregon Wilderness EIS and subsequent 1991 Oregon Wilderness Study Report to the President recommended nearly all of the three WSAs within the ACEC be designated as components of the National Wilderness Preservation System. In 1992, the President submitted to Congress the same recommendation. Congress has no deadline to make a decision on the wilderness issue. WSA land within the ACEC not recommended for wilderness designation are at two locations: (1) the width of the lower

Leslie Gulch canyon floor, not to exceed 400 feet from either side of the Leslie Gulch Road, from the private land at Mud Springs down canyon to the Bureau of Reclamation administered land and (2) the width of the Slocum Creek canyon floor extending for 1,200 feet south from the Slocum Creek campground area.

There is substantial public support for wilderness designation of the WSAs.

While in study status, the three Wilderness Study Areas within the Leslie Gulch ACEC are managed in accordance with BLM's *Interim Managmenf Policy* ***and Guidelines for Lands under Wilderness Review*** (IMP) (BLM Manual Handbook 8550-l) and Instruction Memorandum OR-92-241, "Interim Management of Wilderness Study Areas". In general, the only activities allowed under these guidelines are temporary uses that create no new surface disturbance. Allowing for noted exceptions, proposed surface disturbing management actions within WSAs which would require reclamation could not be implemented until Congress removes an area from WSA status,

The IMP states that livestock grazing activities, mining, and mineral leasing uses on lands under wilderness review may continue in the manner and degree in which these uses were being done on October 21, 1976. These are "grandfathered" uses. Livestock grazing in all three WSAs is grandfathered. There are no grandfathered mining or mineral leasing activities within the WSAs of the Leslie Gulch ACEC.

Activities that do not impair the land's suitability as wilderness or those that protect or enhance wilderness values are permitted in WSAs. The IMP requires separate analysis of impacts for the exceptions of use or suface disturbing activities to ensure that wilderness values are not so impaired as to make a WSA not suitable for designation as wilderness. Minimum necessary facilities for public enjoyment of wilderness values or for public health and safety are also allowed. New trails for foot or animal travel are permitted if they are needed to preserve wilderness and resource values. Maintenance, construction or removal of existing structures and installations are permitted if accomplished by primitive means. New permanent range improvements may be approved for the purpose of enhancing wilderness values or better protecting the rangeland in a natural condition.

Land use authorizations such as leases and special use permits may be permitted if BLM determines that wilderness values would not be impaired. Changes in livestock use are allowed if the changes do not Cause declining condition or trend of the vegetation Or the soil. Noxious weeds may be controlled by grubbing or chemicals if there is no effective alternative and there are no serious adverse impacts on wilderness values.

The IMP provides for land exchanges when BLM receives lands within an area under wilderness review, in exchange for public lands not under wilderness review. BLM's wilderness recommendation for each of the three WSAs of the ACEC did not recommend acquisition of the 40-acre private parcel.

Should any portions of the WSAs be congressionally designated as wilderness, those lands would be managed in accordance with BLM's ***Wilderness Management Policy*** (September, 1981) and BLM Manual ***8560, Management of Designated Wilderness Areas.*** A wilderness management plan would be developed for any designated wilderness area. All issues and needs to specifically manage the wilderness area(s) would be addressed in the plan. Appropriate decisions of this plan would be carried over to the wilderness management plan.

Impacts Of Alternatives On Wilderness

Alternative A

Access and Roads

- Construction of two parking areas along Leslie Gulch Road would provide safe parking for persons going into the Slocum Creek or Honeycombs WSAs, thus enhancing the opportunity to enjoy wilderness values. Overall, primitive recreation opportunities in WSAs would be enhanced by decreasing the number of party contacts with the greater distribution of use.

- Closing motorized vehicle access on Steamboat Ridge and on about 0.75 mile of the Dago Gulch road would prevent unauthorized off-road vehicle use into the three WSAs and enhance primitive recreation opportunities in these WSAs.

Land Tenure

- Acquisition of the 40-acre private parcel at Dago Gulch would allow for consistent management of wilderness values including outstanding natural scenic values and bighorn sheep habitat. Removal of the structures and reclamation of the area north of the Leslie Gulch Road would eliminate these visual intrusions. Proposed parking

area and restroom in Dago Gulch would be designed to have a lower visual impact than the existing developments.

Minerals

- The closure to mineral leasing and material sales throughout the ACEC would protect wilderness values of the ACEC from disturbances associated with these two types of mineral resource development. Locatable minerals development would likely impair wilderness values and not meet VRM Class II objectives.

- The 4,900 acre locatable mineral withdrawal would include those portions of the WSAs not recommended for wilderness designation. Although not within the proposed wilderness areas, mineral development in these areas would severely impact wilderness values within any designated wilderness within the ACEC. Any congressional legislation for designated wilderness within the ACEC would likely withdraw the designated wilderness from all forms of mineral entry. This would provide protection for the remainder of the ACEC within wilderness areas. Eight hundred acres outside recommended wilderness and the protective withdrawal area would not be covered. This land is located on the eastern end of the ACEC.

Livestock Grazing

- The elimination of livestock, livestock trails and the grazed appearance in livestock use locations within the three WSAs would create a less human-induced alteration of the naturalness within the three WSAs.

Noxious Weeds

- Manual control of noxious weeds would help preserve the naturalness of the three WSAs, but this method alone would be less effective than the combination of methods proposed in Alternatives B and C.

Wild Horses

- With the current lack of wild horse use in the ACEC, there would be limited affect on wilderness values by their removal. Wild horse impacts could be similar to those described for livestock under this alternative. The presence of wild horses can have positive or negative impacts for WSA visitors depending upon personal perceptions.

Special Status Plants

- Trail or fence construction or the placement of signs in WSAs to protect special status plant sites would have impacts to the naturalness of a WSA. Fence construction would likely cause more of a visual intrusion that small segments of trail construction or the placement of signs. Any proposed protection measures would be analyzed for their impacts to the naturalness of the area.

Wildlife

Under current practices, there have been no known adverse impacts on wilderness values during bighorn sheep transplant operations. The presence of bighorn sheep wormer blocks or other supplements in public use areas within WSAs would create an undesirable littered appearance. Placement in less apparent locations would reduce impact on wilderness values.

Recreation

- Impacts on wilderness values by recreationists would be less under this alternative than under alternatives B and C. However, recreational use would be directed to fewer specific locations in each of the three WSAs than under alternative C.

- Recreational use impacts would be more dispersed and less acute in high use areas than under Alternative B. The extent of these impacts are partially mitigated by the lower amount of recreational facility development and improvements prescribed under this alternative and by the limitation to day use hiking for access within the WSA portions of the ACEC. Possible implementation of a back country use permit system would increase opportunities for recreationists to experience solitude and a quality primitive recreation experience while aiding the protection of wilderness natural values.

- The protection of naturalness would be the greatest in the WSAs under this alternative. Recreation factors include the closure of two road segments, the development of a parking area at Dago Gulch which would centralize parking for both Dago Gulch and upper Leslie Gulch, improved dispersal of WSA recreational use by establishing two additional parking areas along the main Leslie Gulch Road and by limiting special use permit activities.

- No provisions for the Owyhee Breaks trail could result in proliferation of trails in the WSAs, particularly in Honeycombs and Slocum Creek WSAs. The opportunity to manage this type of recreational use would be foregone.

- The removal of fixed anchors would likely cause more observable visual scars at the Einstein climbing site than if the existing camouflaged hardware were left on the rock face and adequately maintained. Social conflicts between some WSA recreationists would be reduced.

Alternative B

Access and Roads

- With no additional parking provided in the ACEC, the opportunity to improve distribution of use in the WSAs would be forgone, resulting in higher concentrations of use in WSA locations where parking along the road presently occurs. This would lead to a lower quality primitive recreation experience, fewer opportunities for outstanding solitude, and increased physical impacts to resources in these use areas. Visitors to the lesser used areas in WSAs would have increased opportunities for solitude and fewer contacts with other back country users.

- With no change in motorized vehicle access routes, a total of approximately 1.5 miles of existing road would remain available for use in the ACEC, compared to Alternative A. Off-road vehicle use would likely continue into Honeycombs WSA from the Steamboat Ridge road and along the Dago Gulch road into Upper Leslie Gulch and Slocum Creek WSAs. Along steep grades of Steamboat Ridge road, soil erosion from surface water runoff would be a continued concern.

Land Tenure

- Without acquisition of the Dago Gulch 40-acre private parcel, opportunities to remove the visual impacts of the structures there would be forgone.

Minerals

- The closure to leasable minerals and withdrawal of locatable minerals would be significant steps in protecting wilderness values of the three WSAs. Surface disturbing activities associated with salable mineral development would continue to be considered, although environmental analysis would be required prior to any proposed sales. Surface disturbing activities requiring reclamation or which would impair wilderness values would not be authorized.

Livestock Grazing

- Livestock use is permissible in WSAs and designated wilderness. For some visitors, the presence of livestock and the evidence of livestock use (trails, fecal material and grazed areas) reduces their enjoyment of primitive recreation activities. Livestock impacts to wilderness values, such as to special status plants or their habitats, hinders efforts to protect such values, as provided for by existing BLM wilderness program policies and the Wilderness Act.

Noxious Weeds

- The combination manual and chemical control of noxious weeds would be more effective than manual control alone in reducing the impacts of noxious weed invasion on the natural setting of the WSAs.

Wild Horses

- With the current lack of wild horse use within the ACEC, there is limited affect on wilderness values. Depending upon the specific locations and level of the wild horse use, impacts could be similar to those described for livestock under this alternative. The presence of wild horses can have positive or negative impacts for WSA visitors depending upon their personal perceptions.

Special Status Plants

- Under current management direction and guidance, site-specific measures may be implemented to protect special status plant species or other wilderness values. Such measures (signing, fencing, trail relocation) may be approved should monitoring determine such actions to be necessary and wilderness values are not unduly impaired. Trail or fence construction or the placement of signs in WSAs to protect special status plant sites would have impacts to the naturalness of a WSA. Fence construction would likely cause more visual intrusion than trail construction or the placement of signs. This alternative may require an increased degree of protective measures than required under Alternative A due to the retention of livestock grazing.

Wildlife

- Under current practices, there have been no known adverse impacts on wilderness values during bighorn sheep transplant operations. The presence of bighorn sheep wormer blocks or other supplements in public use areas within WSAs would create an undesirable littered appearance. Placement in less apparent locations would reduce impact on wilderness values.

Recreation

- Vehicle access on the Steamboat Ridge and Dago Gulch roads would perpetuate unauthorized off-road use in the three WSAs. No provisions for the Owyhee Breaks trail route system would have the same impacts as described under Alternative A.

- There are fewer specific opportunities to manage various recreation uses under this alternative and less opportunity to direct increased dispersed use to other locations within the WSAs.

- Recreational use impacts would be more concentrated and acute in specific locations of the three WSAs than under Alternatives A or C, since no additional parking areas would be provided. As back country visitation increases within the ACEC, some wilderness values in the presently accessible locations of the WSAs would be more severely impacted. There would be a greater deterioration of outstanding opportunities for solitude as the frequency of party contacts increases in these locations. Organized group use activities would intensify certain physical impacts in the WSAs during concentrated group activities.

- Mitigative measures employed for rock climbing activities are more effective than under Alternative C. The Einstein climbing site would be the only authorized site for sport rock climbing within the ACEC. While anchor removal at the Asylum climbing site would result in some rock surface scaring, the scaring would be inconspicuous to the casual observer due to the distance from common back country use corridors within Upper Leslie Gulch WSA and the site's distance from motorists on the main Leslie Gulch Road.

Alternative C

Access and Roads

- Construction of four parking areas along Leslie Gulch Road would provide safe parking for persons going into the Slocum Creek or Honeycombs WSAs. Primitive recreation opportunities in WSAs would be enhanced by decreasing the number of party contacts with the greater distribution of use. In the long term, physical impacts to resources at the currently heavier used areas would be reduced, with opportunities for solitude and primitive recreation more available. Visitors to the currently lesser used areas would have reduced opportunities for outstanding solitude. Physical impacts would increase in the new areas provided with parking access.

Land Tenure

- Acquisition of the 40-acre private parcel at Dago Gulch would allow for consistent management of wilderness values associated with the area of the ACEC, including outstanding natural scenic values and bighorn sheep habitat. Removal of the structures and reclamation of the area north of the Leslie Gulch Road would eliminate the visual intrusion. Proposed facilities which include a parking area with a restroom in Dago Gulch would be designed to have a lower visual impact than the existing developments.

Minerals

- The closure to mineral leasing and material sales throughout the ACEC would protect wilderness values of the ACEC from disturbances associated with development of these mineral resources.

- While the WSAs remain in study status, IMP guidance does not allow surface disturbance which would require reclamation or unduly impair wilderness values.

- Wilderness designation would likely withdraw approximately 90% of the ACEC from mineral development. Mineral development on the areas not designated wilderness could have significant impacts on any portion of the ACEC which would be designated wilderness.

Livestock Grazing

- The change in grazing season to the winter months would separate the presence of livestock in the WSAs from the visitor use season of the WSAs. While direct evidence of livestock use (trails, fecal material and grazed appearance) could be experienced by recreationists in the WSAs, it would likely be less noticeable than under Alternative B.

Noxious Weeds

- The combination manual and chemical control of noxious weeds would be more effective than manual control alone in reducing the impacts of noxious weed invasion on the natural setting of the WSAs.

Wild Horses

- With the current lack of wild horse use in the ACEC, there is limited affect on wilderness values. There is potential for wild horses to move into the WSA, and their use would be allowed to continue under this alternative. Dependent upon the specific locations and level of the wild horse use, impacts could be similar to those described for livestock under alternative B. The presence of wild horses can have positive or negative impacts for WSA visitors depending upon their personal perceptions.

Special Status Plants

- The exclosure fence for grimy ivesia would be partially within Honeycombs WSA. Although located and designed to minimize its visual presence in the WSA there would be some visual impact and the area would appear less natural. Should monitoring indicate that additional fences or other measures are necessary to protect special status plant sites, then naturalness and scenic values would be further impacted. This alternative could be as impacting on wilderness values as Alternative B.

Wildlife

- Under current practices, there have been no known adverse impacts on wilderness values during bighorn sheep transplant operations. The presence of bighorn sheep wormer blocks or other supplements in public use areas within WSAs would create an undesirable littered appearance. Placement in less apparent locations would reduce impact on wilderness values.

Recreation

- Continued motorized vehicle access on the Steamboat Ridge road would perpetuate off-road vehicle trespass in this area of the Honeycombs WSA.
- Non-motorized primitive recreation use opportunities would be enhanced in the upper Dago Gulch areas within Upper Leslie Gulch and Slocum Creek WSAs. Should it be needed, a back country access permit system would enhance opportunities of solitude, primitive recreation and protection of wilderness values.
- Development of the Cwyhee Breaks trail route system would avoid proliferation of primitive trails in Honeycombs and Slocum Creek WSAs.
- Recreational horse use would be more limited than under Alternative B, with impacts to special status plant habitats and populations less likely to occur by riding activities.
- The extent of developed recreation facilities, developed potable water and the opportunity to camp in the WSAs would invite greater use and longer recreational stays than under Alternatives A or B. This impact would be partially off set by more widely dispersing the WSA recreational use with the establishment of four parking areas along the Leslie Gulch Road. Naturalness would be more impacted by recreational use under this alternative than under alternatives A and B.
- The level of impact to wilderness values by rock climbing would be greatest under this alternative. Although mitigative measures would minimize each impact, the locations where climbing would be allowed would be the greater.

Monitoring Needs

Continue WSA general surveillance patrols during the primary use season (April through October), one per month minimum, and conduct aerial surveillance patrols as deemed necessary. To ensure compliance with the IMP and other guidance for WSAs, conduct an analysis of planned or authorized surface disturbing activities in WSAs, e.g. fence/trail, parking areas, structure placements, mineral exploration/development. As described under Monitoring Needs for Recreation, conduct studies, determine basline data and establish standards to monitor for retaining or enhancing outstanding opportunities for solitude and primitive, unconfined recreation, and for protecting wilderness natural values in WSAs and any Congressional designated wilderness.

Other Critical Elements

The following elements are either not present within the ACEC or are not affected by any of the management alternatives considered: air quality, cultural resources, prime and unique farmlands, flood plains, native American religious concerns, hazardous wastes, wetlands, wild and scenic rivers, riparian areas.

Organizations Consulted

Boise rock climbers group
Oregon Native Plant Society
Oregon Department of Fish and Wildlife
Three Fingers Temporary Allotment Grazing Permitees
Unites States Bureau of Reclamation
Vale District Multiple Use Advisory Council
United States Fish and Wildlife Service

Participating Staff

Clair Button, Botonist, Vale District
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Randy Eyre, Range Conservationist, Malheur Resource Area
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Connie George, Engineering Draftsman, Vale District
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Kathy Helm, Writer Editor, Coos Bay District
Bonnie Jakubos, Wildlife Biologist, Malheur Resource Area
Ken Thacker, Soil Conservationist, Malheur Resource Area

Glossary

Active Preference - That portion of the total grazing preference for which grazing use may be authorized.

Active Use - The total number of AUMs authorized for grazing by livestock.

Activity Plan - A document which describes management objectives, actions and projects to implement decisions of planning documents.

Allotment - An area of public land, consisting of one or more pastures, where one or more operators graze their livestock which may include parcels of state or private land. The number of livestock and season of use are stipulated for each allotment.

Alluvial Deposit -Accumulation of soil or rock material which has been transported by moving water.

Animal Unit Month (AUM) - The amount of forage required to sustain one cow with one calf, or their equivalent for one month.

Area of Critical Environmental Concern - An area of BLM administered lands where special management attention is needed to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resource or other natural systems or processes; or to protect life and provide safety from natural hazards.

Back Country Byway - A road segment designated as part of the National Scenic Byway System.

Bureau Sensitive Species - Plant or animal species eligible for federal listed, federal candidate, state listed, or state candidate (plant) status, or on List 1 in the Oregon Natural Heritage Data Base, or approved for this category by the State director.

Candidate Species - Those plants and animals included in Federal Register "Notices of Review" that are being considered by the Fish and Wildlife Service (FWS) for listing as threatened or endangered. There are two categories that are of primary concern to BLM. These are:

Category 1 Species - Taxa for which the FWS has substantial information on hand to support proposing the species for listing as

threatened or endangered. Listing proposals are either being prepared or have been delayed by higher priority listing work.

Category 2 Species - Taxa for which the FWS has information to indicate that listing is possibly appropriate. Additional information is being collected.

Carrying Capacity - The maximum number of animals an area can sustain without inducing damage to vegetation or related resources, such as soil and water.

Critical Growing Period - The portion of a plant's growing season, generally between flowering and seed ripe, when defoliation is most detrimental.

Cumulative Effect - The impact which results from identified actions when they are added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions, Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

Cultural Resources - Any definite location of past human activity identifiable through field survey, historical documentation, or oral evidence; includes archaeological sites, structures, or places, and places of traditional cultural or religious importance to specified groups whether or not represented by physical remains.

Deferred Grazing - Grazing occurs after a specified period, such as after seed ripe of key forage species.

Developed Recreation Site - A site developed with permanent facilities designed to accommodate recreation use.

Dispersed Recreation - Outdoor recreation which visitors are diffused over relatively large areas. Where facilities or developments are provided, they are primarily for access and protection of the environment rather than comfort or convenience of the user.

Environmental Assessment (EA) - A systematic analysis of site-specific BLM activities used to determine whether such activities have a significant effect on the quality of the human environment and whether a formal Environmental Impact Statement (EIS) is required; and to aid an agency's compliance with NEPA when no EIS is necessary.

Environmental Impact - The positive or negative effect of any action upon a given area or resource.

Environmental Impact Statement (EIS) - A formal document to filed with the Environmental Protection Agency that considers significant environmental impacts expected from implementation of a major federal action.

Erosion - Detachment and movement of soil or rock by water, wind, ice, or gravity.

Grazing System - The specific way in which the amount and timing of grazing is planned for a given area.

Gully - A soil erosion channel formed by surface flowing water which has been concentrated in a narrow area. Depths can range from a few feet to as much as 100 feet.

Habitat - The place where a plant or animal naturally lives and grows.

Impact - A spatial or temporal change in the environment caused by human activity.

Impair-To diminish in value or excellence.

Inholding - Parcels of land with surface or mineral rights held privately or administered by a non-BLM agency.

Leasable Minerals - Minerals which may be leased to private interests by the federal government. Includes oil, gas, geothermal resources and coal.

Listed Species -Any species of fish, wildlife or plant which has been determined to be endangered or threatened under Section 4 of the Endangered Species Act. It is any plant or animal which is in danger of extinction throughout all or a significant part of its range. Listed species are found in 50 CFR 17.11-17.12.

Locatable Minerals - Minerals subject to exploration, development and disposal by staking mining claims as authorized by the Mining Law of 1872 (as amended). This includes valuable deposits of gold, silver and other uncommon minerals not subject to lease or sale.

Management Framework Plan (MFP) - A land use plan that established coordinated land use allocations for all resource and support activities for a

specific land area within a BLM district. It established objectives and constraints for each resource and support activity and provided data for consideration in program planning. This process has been replaced by the Resource Management Planning process.

Mining Claim - Portions of public lands claimed for possession of locatable mineral deposits, by locating and recording under established rules and pursuant to the 1872 Mining Law.

Mitigating Measures - Modifications of actions which (a) avoid impacts by not taking a certain action or parts of an action; (b) minimize impacts by limiting the degree or magnitude of the action and its implementation; (c) rectify impacts by repairing, rehabilitating or restoring the affected environment; (d) reduce or eliminate impacts over time by preservation and maintenance operations during the life of the action; or (e) compensate for impacts by replacing or providing substitute resources or environments.

Monitoring/Evaluation - The orderly collection and analysis of data to evaluate the progress and effectiveness of on-the-ground actions in meeting resource management objectives.

Naturalness - Refers to an area which "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable." (Wilderness Act, 1967)

Noxious Weed - A plant specified by law as being especially undesirable, troublesome and difficult to control.

Off-Highway Vehicle (OHV) - Any motorized track or wheel vehicle designed for cross country travel over natural terrain.

Off -Highway Vehicle Designation

Open: Designated areas and trails where off -road vehicles may be operated subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343.

Limited: Designated areas and trails where off-road vehicles are subject to restrictions limiting the number or types of vehicles, date and time of use; limited to existing or designated roads and trails.

Closed: Areas and trails where the use of off -road vehicles is permanently or temporarily prohibited. Emergency use is allowed.

Outstanding - Standing out and superior among other of its kind.

Pasture - A subdivision of a grazing allotment capable of being grazed by livestock independently from the rest of the allotment.

Plan Amendment - A change in the terms, conditions or decisions of a resource management plan.

Primitive and Unconfined Recreation - Nonmotorized and undeveloped types of outdoor recreation activity.

Primitive Recreation - Characterized under the ROS by opportunity for isolation from human sights and sounds, to feel a part of the natural environment, to have high risk challenge, and to use outdoor skills in a large and essentially unmodified natural environment. User concentration is very low; evidence of other users minimal. Only facilities essential for resource protection are provided. Recreational motorized use not permitted. Activity examples include backpacking and camping, hiking, climbing, enjoyment of scenery and natural features, hunting, fishing and nonmotorized floatboating.

Raptor - Birds of prey, such as hawks, eagles and owls.

Recreation Opportunity Spectrum - A continuum used to characterize recreation opportunities in terms of setting, activity and experience. The spectrum contains six classes: Primitive, Semi-primitive Nonmotorized, Semi-primitive Motorized, Roaded Natural, Rural and Modern Urban.

Research Natural Area (RNA) - An area that contains natural resource values of scientific interest and is managed primarily for research and educational purposes.

Revegetation - Reestablishment of a vegetative cover on a disturbed or burned area.

Right-of-Way - A permit or an easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, reservoirs and the lands covered by such an easement or permit.

Rill - A small erosive feature caused by the channeling of water on slopes.

Road Prism - A cross section of a constructed road which includes cutbanks, roadside ditches, road surface and fill slopes below the road.

Roaded Natural Recreation - A class (type) of recreation characterized under the ROS by opportunities for both motorized and nonmotorized recreational activities with site-specific facilities and controls sometimes provided for user convenience, safety and resource protection. Opportunity to have a high degree of interaction with the natural environment is available. Activity examples may include those described under Primitive Recreation, plus auto touring, interpretive use, organized campground, picnic and boating activities and motorized boating sports.

Rotational Grazing - Grazing use is subdivided into units or pastures with grazing taking place in one unit, then another, in regular succession. This rotational use can be alternated between years in a variety of grazing systems.

Salable Minerals - High volume, low value mineral resources including common varieties of rock, clay, decorative stone, sand and gravel.

Scenic Quality - The relative worth of a landscape from a visual perception point of view.

Semi-Primitive Nonmotorized Recreation - Characterized under the ROS by some opportunity for isolation from human sights and sounds. Opportunity to have a high degree of interaction with the natural environment with moderate challenge and risk, and to use outdoor skills in a predominantly unmodified natural environment of moderate to large size. Concentration of users is low. Facilities are provided for the protection of resources and safety of users, only.

Soil - A natural body on the surface of the earth composed of mineral and organic materials, living forms, air and water.

Solitude - 1. The state of being alone or remote from habitations; isolation. 2. A lonely, unfrequented or secluded place.

Special Features - Features that may be present in an area under consideration for wilderness, such as ecological, geological or other features of scientific, educational, scenic or historical value.

Special Recreation Management Area (SMRA) -An area where a commitment has been made to provide specific recreation activity and experience opportunities. These areas usually require a high level of recreation investment and/or management. They include recreation sites but recreation sites alone do not constitute SRMAs.

Special Status Species - Plant or animal species falling in any of the following categories (see separate glossary definitions for each):

- -Threatened or Endangered Species
- -Proposed Threatened or Endangered Species
- -Candidate Species
- -State Listed Species
- -Bureau Sensitive Species
- -Bureau Assessment Species

Sport Rock Climbing - For this plan, the recreational and competitive sport of free climbing rock walls on an established climbing route without the direct assistance of artificial climbing devices. Climbers use hand/foot holds (natural or man-made) to assist climbing. Climber safety is afforded, in part, by use of ropes attached on fixed (bolted, permanently installed) anchoring devices placed into the rock surface and the use of gymnastic hand chalk. Climbing routes are graded by an international method measuring the level of climbing difficulty.

State Listed Species - Plant or animal species listed by the State of Oregon as threatened or endangered pursuant to ORS 496.004, ORS 498.026 or ORS 564.040.

Suspended Preference -The number of AUMs removed from a permittee's active preference.

Threatened Species - Any species defined through the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range and published in the Federal Register.

Total Preference - The active preference and suspended preference together make up total preference.

Unnecessary or Undue Degradation - Surface disturbance greater than what would normally result when an activity is being accomplished by a prudent operator in usual, customary and proficient operations of similar character and taking into consideration the effects of operations on other resources and land uses, including those resources and uses outside the area of operations. Failure to initiate and complete reasonable mitigation measures, including

reclamation of disturbed areas, or creation of nuisance, may constitute unnecessary or undue degradation. Failure to comply with applicable environmental protection statutes and regulations thereunder will constitute unnecessary and undue degradation.

Utilization - The proportion of the current year's forage production consumed or destroyed by grazing animals. This term may refer to a single species or to the whole vegetative complex.

Visual Resource Management (VRM) Classes - The inventory and planning actions to identify visual values and establish objectives for managing those values and the management actions to achieve visual management objectives.

Visual Class II Management Objective - To retain the existing character of the landscape. The level of change, overall, to the existing landscape should be low. Management activities may be seen, but should not attract attention of the casual observer. Any changes must repeat the basic visual elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.

Wilderness Review Program - The term used to cover the entire process of wilderness inventory, study and reporting for the wilderness resource, culminating in recommendations submitted through the Secretary of the Interior and the President to Congress as to the suitability or nonsuitability of each wilderness study area for inclusion in the National Wilderness Preservation System.

Wilderness Study Area (WSA) - A roadless area inventoried and found to be wilderness in character, having few human developments and providing outstanding opportunities for solitude and primitive recreation, as described in Section 603 of the Federal Land Policy and Management Act and in Section 2(c) of the Wilderness Act of 1964.

Withdrawal - A designation which restricts or closes public lands from the operation of land or mineral disposal laws.

Wormer Blocks - A medicated supplement in salt block form for treatment of internal parasites.

Appendix I

Analysis of Factors Affecting Special Status Plant Species

I. Special Status Plants

At least five rare plant species are found in concentrated numbers in this area:
1. Ertter's groundsel (Senecio *ertterae*) is an annual species, initiating growth in early spring and completing its life cycle by the end of November. Its global distribution is limited to the Leslie Gulch vicinity and to two small sites near Birch Creek, approximately 6 miles southwest of Leslie Gulch. Suitable habitat has been surveyed in the Honeycombs to the north, but only one site has been found. Little potential habitat remains to be explored for the species, and it is anticipated that at least 90% of the plant sites have been identified. Numbers of plants vary dramatically based on timing and amount of rainfall in the area.

2. Packard's blazing star ***(Mentzelia packardiae***) also is an annual species, with its life cycle generally completed by late June. It grows on the same loose talus rubble as ***Senecio ertterae*** but only on the lower slopes and more gentle fans which spread out at the base of the talus runs. Outside of Leslie Gulch, only a single site in northern Nevada is known for this species. Very little potential habitat remains to be examined for *Mentzelia* and the likelihood of additional site discoveries is slim.

3. Grimy ivesia (*Ivesia rhypara* var. *rhypara*), a perennial herb, grows on five discrete sites in the Vale District, three of which are found in the Leslie Gulch ACEC. One other small site is known from Lake County, and two sites have been identified in northern Nevada. In spite of the fairly wide distribution, the species is extrodinarily rare. Unsuccessful inventories have attempted to locate more populations. It is restricted in our region to barren outcrops of Leslie Gulch Ash-Flow Tuff with two to three inches of rubble on top, a harsh site with little rooting depth.

4. Owyhee clover (*Trifolium owyheense*) is known from five sites in the Leslie Gulch ACEC. Sites are also known outside the area, but all are found east of the Owyhee Reservoir. Little is known about this species, and it is anticipated that more sites will be located with intensive inventory. Succulent legumes such as this are palatable to herbivores.

5. Of the rare species in the Leslie Gulch ACEC, sterile milk-vetch (*Astragalus sterilis*) is the most wide-spread geographically and in terms of known numbers and number of sites, although it is endemic to the Owyhee Region. It occupies loose ash sites of varying colors and textures. An extensive inventory for the species has been conducted east of the Owyhee Reservoir, and more sites are anticipated to be found when a similar inventory can be conducted west of the reservoir.

Ivesia is also known from one site (<1/4 acre) in Lake County, Oregon, and one population each in Washoe County (1 acre,) and Elko County, (l-2 acres) Nevada. *Mentzelia* ***packardiae*** occurs with ***Ivesia*** at the Elko site. All other locations for these species are in and around Leslie Gulch and the Sucker Creek Formation.
In 1991, the U.S. Fish and Wildlife Service received a petition to list ***Senecio ertterae, Mentzelia packardiae, Ivesia rhypara*** var. ***rhypara,*** and *Astragalis sterilis*. Reasons cited for the petition to list included potential impacts from cyanide heap-leach gold mining, invasion of weedy species, and the mechanical disturbance of sites due to livestock grazing. ***Senecio*** and ***Mentzelia*** are also listed by the State of Oregon as threatened.

The table below shows the federal candidate species, the number of acres of habitat in the Leslie Gulch ACEC, the total number of habitat acres for the entire species range, and the number of acres in areas used by live-stock in Leslie Gulch.

Leslie Gulch Species

Species:	Fed. Stat.	State Status	Global Acres Habitat	L. Gulch Acres Habitat	L. Gulch Grazed Acres
Senecio ertterae	**Cl**	LT	227	184	93
Mentzelia packardiae	c2	LT	<100	93	93
Ivesia rhypara var. ***rhypara***	c2	C	<20*	4	4
Trifolium owyheense	c2	C	<60	40**	35"

. Estimate of habitat for *Ivesia rhypara* var. *rhypara* is highly optimistic. allowing for discovery of new habitat in Nevada.
. * Estimate of habitat for *Trifolium owyheense* is based on inadequate inventory. Total after completion of further inventories will probably be closer to [illegible] acres.

Populations of several of these species are so restricted in extent that any man-caused disturbances that reduce population numbers or create opportunities for exotic weed species are a major concern for future viability of the species. In the case of the ***Senecio*** and ***Mentzelia,*** the habitat patches for each species are so close together that spread of disease or weedy competitors would be very difficult to control. Wiih ***Ivesia*** and ***Trifolium,*** the remaining habitat patches are so small that the risk of local extinction is relatively high.

In particular, ***Ivesia*** is directly and immediately threatened by loss of genetic material due to death of plants because of the extremely small number of plants and area of habitat.

Both ***Ivesia*** and ***Trifolium*** appear to be palatable to animals.

While the remaining rare plants have survived nearly a hundred years of livestock grazing, there is no method to compare pre-grazing and post-grazing populations. It is certain that large portions of the rare plant habitat have been affected to some degree and are surrounded with poor condition range sites. There appears to be suitable habitat in the vicinity which is not occupied by these species. It is not possible to determine whether any of these species were much more widespread in the past. However, they all seem to require specific soil substrates which are found only near Leslie Gulch or similar centers of volcanic activity.

II. Habitat Conditions

Ecological conditions of the upland plant communities in Leslie Gulch vary from late seral stages on the north-facing and more inaccessible slopes to early and mid seral stages, particularly near the reservoir. In the canyon bottoms near the reservoir and on some of the south-facing slopes, exotic species such as Russian thistle, cheatgrass, and wooly mullein are common, Canyon bottoms near the reservoir are generally in early seral condition, with desirable grass species such as basin wildrye, sand dropseed and needlegrass reduced to trace occurrences. Other canyon bottoms are in at least mid seral stage. Livestock forage utilization studies taken since 1985 show that recent use levels have been between 10 and 16 percent of annual production on bluebunch wheatgrass. Existing monitoring studies are not designed to determine if recent range management changes are allowing canyon bottom habitats to improve. Observed apparent trend in Slocum Creek was static in September, 1992.

Senecio ertterae occurs on steep talus slopes, moderate to gentle slopes, and in canyon bottoms and washes wherever there is sufficient material of the ash tuff gravels present. ***Mentzelia packardiae*** is found nearly exclusively at the base of loose talus slopes. Some of this habitat has been removed by construction of the roads in Leslie and Dago Gulchs. The lower slopes and canyon bottom habitat are crossed by numerous compacted trails which are no longer suitable habitat, and which may provide opportunities for establishment of exotic weeds, The steeper upper slopes, which are habitat for ***Senecio,*** but not *Mentzelia*, do not have significant signs of trailing, Recent research (1983) in Leslie Gulch and the adjacent Honeycombs indicates that the observed trails are caused by livestock which spend all of their time on slopes less than 40%, while the bighorn sheep predominately use slopes over 40%. It appears that bighorn sheep numbers are too small to cause a significant disruption of the rare plant habitat on the steeper slopes. Deer populations are also too small to have any effect.

Ivesia and ***Trifolium*** occur on flat to gently sloping clay sites, but there is apparently a distinct difference in the types of suitable clay substrate composition since the species do not occur together. Some habitat of both species has been destroyed by road construction. One population of ***Ivesia*** at the edge of the Honeycombs WSA (northeast of Leslie Gulch) has been partially destroyed by road construction associated with mining exploration, and may be affected by current mining claims. In Leslie Gulch ACEC, the primary access road cuts through one population of *Ivesia* and livestock are presently trailed through the site into and out of the pasture.

III. Factors Affecting Special Status Plants and Habitat

Impacts to rare plant species in the ACEC include potential and known effects, Destruction of plant habitat, damage to the plants themselves, and the invasion of noxious weeds are the biggest concerns that have been identified. Soil compaction and road construction in ***Senecio,*** *Mentzelia,* and ***Ivesia*** sites are examples of habitat destruction. Causes of damage to the plants include herbivory on ***Ivesia*** and ***Trifolium,*** as well as trampling, breakage, and uprooting from livestock trailing through ***Menfzelia, Senecio,*** and ***Ivesia*** sites.

Invasion of noxious weeds presents one of the greatest threats to rare species and their habitats. Cheatgrass has become established throughout all habitat types, but is more abundant in disturbed soils and canyon bottom sites. Russian thistle is most abundant along roadsides and on disturbed soils. These species do not appear to have the ability to fully colonize and dominate the rare plant habitat. However, within the last ten years, extensive infestations of whitetop have become problematic in the areas east of Leslie Gulch. Cattle have been observed to ingest this species, and there is little doubt that viable seed may be transported by various animals. Vehicles may carry the seeds into the area along roads. To date, whitetop is found only along the road at approximately four sites in Leslie Gulch where control measures have been initiated. It is a major concern that seed may be carried to less accessible areas, where the plants could become well-established before control measures can effectively remove the infestations. Scotch thistle and yellow star-thistle are also of concern at present. These aggressive species may be able to outcompete the rare plants. Disturbed habitat along the roads is the primary avenue of weed invasion into Leslie Gulch. Livestock trails are the main source of disturbance which could allow the weeds to spread directly into rare plant habitat. Ungulates including cattle, horses, bighorn sheep, and deer could spread weeds into the rare plant habitats by carrying seeds on hooves or through their digestive tracts. Concentrated hiking and camping activity also have the potential to create disturbed, compacted soils and transport weed seeds into rare plant habitat.

Since the late l800's, Leslie Gulch has experienced grazing from domestic animals, both cattle and sheep. Numbers of animals and seasons of use in the canyon are unknown for the earlier years. From 1983 to 1990, there were 140 head of yearling cattle from March 1 to May 1 in the Leslie Gulch pasture of the ACEC. In 1991 and 1992, the only use was from trespass cattle. During the winter of 1992-93, trespass livestock used areas near Owyhee Reservoir, including Slocum Creek.

Wild horses were present in Leslie Gulch during the 1960's. Although Leslie Gulch ACEC is still part of a wild horse herd management area, the wild horses generally have been using habitat north of the ACEC for the past twenty years. There are no natural or manmade barriers to prevent movement into the ACEC. Water sources in the pasture are limited to Mud Spring, ephemeral seeps in Slocum Creek and Juniper Gulch, and at the Owyhee Reservoir. Because of the steepness of the canyons and the poor distribution of water in the Leslie Gulch ACEC, livestock use is concentrated on the lower slopes and near the water sources, intensifying the potential of damage to rare plant habitat from livestock trailing.

Recreational use has been concentrated near the developed campground, along roads, at the reservoir, and in areas offering rock climbing opportunities. The Slocum Creek trail is the only obvious hiking trail crossing or impacting rare plant habitat. This primary hiking access trail to the WSA was probably created by livestock, which still actively use the trail. The rock climbing areas known to be in active use do not appear to be near rare plant habitat. Recreational vehicles and horse use have the potential to create the same types of impacts as cattle, particularly if they are allowed off of the main roads. As noted above, access roads have destroyed some habitat of all four rare species, but present motor vehicle use does not appear to be causing extension of the damage.

IV. Possible Management Actions to Resolve Problems and Conserve Rare Species

Plant sites impacted by the main Leslie Gulch Road could be restored in one or two areas by outsloping the road to allow the outwash to pass over and form new habitat downstream of the road. This would increase the requirement for road maintenance on these sections. Closing or re-routing the public access road could also be considered. However, moving the road would destroy additional habitat in some areas. Where the road went through ***Ivesia*** habitat, there is no option of repair because the clay soil was cut away.

If livestock were kept off the slopes, the ash tuff talus would naturally cover the compacted trails in a few years and restore the habitat. In addition to restoring lost habitat, this restoration would also discourage noxious weed invasion. Compacted clay soils on the *Ivesia* habitat could be expected to recover more slowly. The only feasible way to keep livestock and horses *off Senecio* and *Mentzelia habitat is to* exclude them from the Leslie Gulch Pasture. These species occur in too many small patches scattered along the canyon to allow site specific exciosures. Fencing to protect *Ivesia* would require approximately 2.5 miles of fence and installation of one cattleguard. The alternative to installing a cattleguard would be to close and reroute part of the main Leslie Gulch Road, or to close it and upgrade the old access road. Without the exclosure, trailing damage and compaction could be reduced on the *Ivesia* habitat by trailing the livestock along the old access road.

Changing the season of use of livestock would not substantially reduce the trampling and trailing effect observed *On* the ash tuff habitat. Trespass livestock use in the winter resulted in concentrated use near the reservoir due to adverse weather, thereby increasing compaction on rare plant sites in Slocum Creek. Change in season of use might encourage an upward trend in species composition in poor condition range sites. A winter season of use might actually cause increased browsing on ***Ivesia*** *rhypara* since this is a perennial rather succulent species. Winter grazing use will increase utilization of sadscale, a plant that grows on the ash tuff sites occupied by ***Senecio*** and *Mentzelia.* In 1993, cattle actively searched for and browsed on shadsclae on open slopes in winter, causing significant degress of disturbance to the rare plant habitat. Repeated, cumulative impacts could result in substantial loss of habitat.

One of the most effective means of reducing the risk of spreading weeds into the rare plant habitat is to exclude livestock from the pasture. Although the area has been grazed by livestock for a hundred years, the invasion by noxious weeds is a relatively recent phenomenon.

To further reduce the risk of weeds being carried into Leslie Gulch, horse use could be banned except for administrative purposes (such as rounding up livestock). A weaker, less enforceable measure would be to require the horses be provided with weed-free hay and restricting them to road surfaces.

Modifying the wild horse herd management area boundary to exclude Leslie Gulch would remove any potential impacts of wild horse use on rare plants.

While motor vehicles could be banned as a means to reduce the risk to spread weeds, it is probably more appropriate to maintain aggressive weed control along the road. Banning vehicles would mean abandoning the road. Reclamation of the abandoned road would take a long time and provide habitat for invasion of weeds.

Dago Gulch road could be closed to public motor vehicle access. It dead ends at private land where there is no adequate turn-around constructed. Widening the road or constructing a turn-around at the gate would destroy habitat for ***Senecio*** *ertterae.* Public vehicular traffic is presently creating minor impacts to the rare plant habitat. Alternatively, the road could be closed at the proposed Dago Gulch campsite.

Road maintenance activities should be carefully planned and coordinated between the botanist and engineering staff. Some modifications may be feasible to allow recovery of lost habitat, but the primary concern is to avoid further losses.

Dust from the road does not appear to coat the plants. If such a problem were discovered, we could consider using dust control measures on the road surface on a site specific basis.

The number of campsites or users at Slocum Creek campground should be monitored and regulated if people start climbing on the nearby ash tuff slopes. The trail up Slocum Creek could be rerouted to avoid the best quality habitat. Another option would be to place interpretive signs at the campground trail access to encourage people to stay *off* the old trail and slopes to let them heal. However, these options would only be effective if

livestock use was removed. Closing the trail completely is an option, but probably an unreasonable one since this is the best access point to the WSA from Leslie Gulch (access in Dago Gulch results in trespass).

V. Conclusions

BLM's policy is to "...ensure that actions do not contribute to the need to list..." any species as threatened or endangered (BLM Manual 6840). Several of the rare plant species in Leslie Gulch ACEC are so restricted in terms of range of occurrence, acres of habitat, and in one case, low numbers of individuals, that any factor reducing plant vigor, numbers, or available habitat may increase the risk of local extinction.

The best management practices for rare plants in Leslie Gulch include the following:

1. Restriction of the Dago Gulch road to public access;
2. Elimination of grazing from the Leslie Gulch pasture;
3. Mineral withdrawal;
4. Control of noxious weeds;
5. Careful road maintenance;
6. Control of recreational uses, particularly intensive campsites and use of horses.